LINKSYS® by Cisco

CISCO™

USER GUIDE

Simultaneous Dual-Band Wireless-N Gigabit Router

Model: **WRT610N**

LINKSYS® by Cisco

About This Guide

Icon Descriptions

While reading through the User Guide you may see various icons that call attention to specific items. Below is a description of these icons:

NOTE: This check mark indicates that there is a note of interest and is something that you should pay special attention to while using the product.

WARNING: This exclamation point indicates that there is a caution or warning and it is something that could damage your property or product.

WEB: This globe icon indicates a noteworthy website address or e-mail address.

Online Resources

Website addresses in this document are listed without **http://** in front of the address because most current web browsers do not require it. If you use an older web browser, you may have to add **http://** in front of the web address.

Resource	Website
Linksys	**www.linksysbycisco.com**
Linksys International	**www.linksysbycisco.com/international**
Glossary	**www.linksysbycisco.com/glossary**
Network Security	**www.linksysbycisco.com/security**

Copyright and Trademarks

Chapter 1:
Product Overview

Thank you for choosing the Simultaneous Dual-Band Wireless-N Gigabit Router. The Router lets you access the Internet via a wireless connection or through one of its four switched ports. With the built-in storage link, you can easily add gigabytes of storage space onto your network using USB 2.0 hard drives, or plug in a USB flash disk to access your portable data files. The built-in media server streams music, video and photos from the attached storage device to any UPnP-compatible media adapter. Configuring the Router is easy using the provided browser-based utility.

For more wireless bandwidth, the Router can create two simultaneous yet separate Wireless-N networks, one using the 5 GHz band and one using the 2.4 GHz band. For example, use the Wireless-N 2.4 GHz network to surf, e-mail, and print while keeping the less crowded, Wireless-N 5 GHz network free for time-sensitive traffic like music, gaming, and high-definition video. For more information, refer to **Simultaneous Networks**, **page 12**.

Front Panel

1, 2, 3, 4 (Green/Blue) These numbered LEDs, corresponding with the numbered ports on the Router's back panel, serve two purposes. The LED is continuously lit when the Router is connected to a device through that port. It flashes to indicate network activity over that port. The LED lights up green when the port is connected to a gigabit port or blue when the port is connected to a 10/100 port.

Wi-Fi Protected Setup Button If you have client devices, such as wireless adapters, that support Wi-Fi Protected Setup, then you can use the Wi-Fi Protected Setup button to automatically configure wireless security for your wireless network(s).

To use Wi-Fi Protected Setup, run the Setup Wizard, or refer to **Wi-Fi Protected Setup**, **page 13**.

Wi-Fi Protected Setup LED (Blue/Amber) The LED flashes blue for two minutes during the Wi-Fi Protected Setup process and lights up blue when the Wi-Fi Protected Setup process is successful.

The LED lights up amber if there is an error during the Wi-Fi Protected Setup process. Make sure the client device supports Wi-Fi Protected Setup. Wait until the LED is off, and then try again.

The LED flashes when a Wi-Fi Protected Setup session is active. The Router supports one session at a time. Wait until the LED is solidly lit, or off before starting the next Wi-Fi Protected Setup session.

Wireless (Blue) The Wireless LED lights up when the wireless feature is enabled. It flashes when the Router sends or receives data over the network.

Internet (Green/Blue) The Internet LED lights up when there is a connection made through the Internet port. It flashes to indicate network activity over the Internet port. The LED lights up green when the port is connected to a gigabit port or blue when the port is connected to a 10/100 port.

USB (Blue) The USB LED lights up when a USB device is attached. It flashes when data is being sent to or received from this device.

Power (Blue) The Power LED lights up when the Router is powered on. When the Router goes through its self-diagnostic mode during every boot-up, the LED flashes. When the diagnostic is complete, the LED is continuously lit.

Back Panel

USB Port The USB port connects to a USB storage device.

Internet The Internet port is where you connect your cable or DSL Internet connection.

1, 2, 3, 4 Using network cables, these Ethernet ports (1, 2, 3, 4) connect the Router to computers on your wired network and other Ethernet network devices.

Reset There are two ways to reset the Router's factory defaults. Either press and hold the Reset Button for approximately five seconds, or restore the defaults from the *Administration > Factory Defaults* screen in the Router's browser-based utility (refer to **Administration > Factory Defaults**, **page 32**).

Power Switch Press **I** the end to power on the Router. Press the **O** end to power off the Router.

Power The Power port is where you connect the power adapter.

Horizontal Placement

The Router has four rubber feet on its bottom panel. Place the Router on a level surface near an electrical outlet.

Wall-Mounting Placement

The Router has two wall-mount slots on its bottom panel. The distance between the slots is 175.56 mm (6.91 inches).

Two screws are needed to mount the Router.

Suggested Mounting Hardware

4-5 mm   1-1.5 mm   2.5-3.0 mm

† Note: Mounting hardware illustrations are not true to scale.

NOTE: Linksys is not responsible for damages incurred by unsecured wall-mounting hardware.

Follow these instructions:

1. Determine where you want to mount the Router. Make sure that the wall you use is smooth, flat, dry, and sturdy. Also make sure the location is within reach of an electrical outlet.

2. Drill two holes into the wall. Make sure the holes are 175.56 mm (6.91 inches) apart.

3. Insert a screw into each hole and leave 3 mm (0.12 inches) of its head exposed.

4. Position the Router so the wall-mount slots line up with the two screws.

5. Place the wall-mount slots over the screws and slide the Router down until the screws fit snugly into the wall-mount slots.

175.56 mm
(6.91 in)
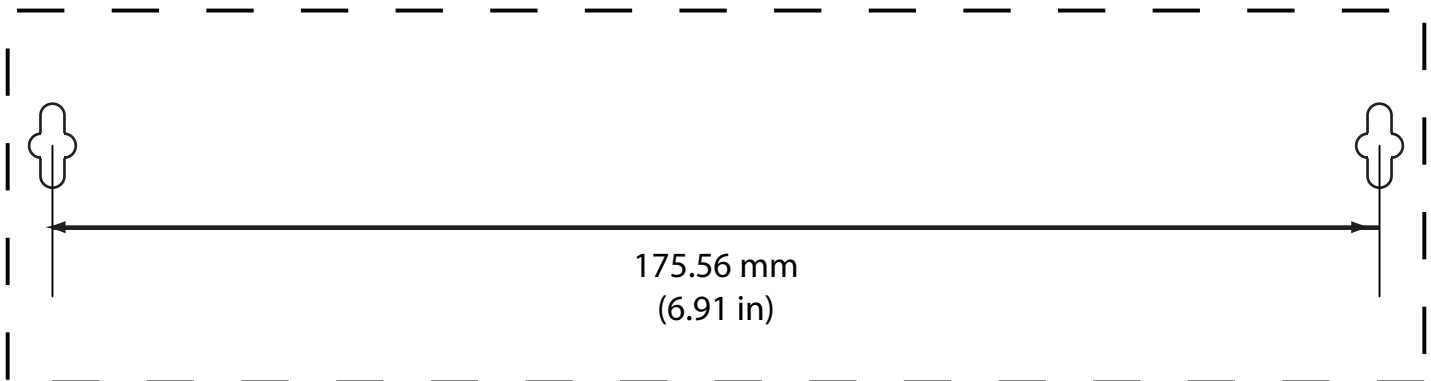
Print this page at 100% size.

Cut along the dotted line, and place on the wall to drill precise spacing.

Wall-Mounting Template

Chapter 2:
Wireless Security Checklist

Wireless networks are convenient and easy to install, so homes with high-speed Internet access are adopting them at a rapid pace. Because wireless networking operates by sending information over radio waves, it can be more vulnerable to intruders than a traditional wired network. Like signals from your cellular or cordless phones, signals from your wireless network can also be intercepted. Since you cannot physically prevent someone from connecting to your wireless network, you need to take some additional steps to keep your network secure.

1. Change the default wireless network name or SSID

Wireless devices have a default wireless network name or Service Set Identifier (SSID) set by the factory. This is the name of your wireless network, and can be up to 32 characters in length. Linksys wireless products use **linksys** as the default wireless network name. You should change the wireless network name to something unique to distinguish your wireless network from other wireless networks that may exist around you, but do not use personal information (such as your Social Security number) because this information may be available for anyone to see when browsing for wireless networks.

2. Change the default password

For wireless products such as access points and routers, you will be asked for a password when you want to change their settings. These devices have a default password set by the factory. The Linksys default password is **admin**. Hackers know these defaults and may try to use them to access your wireless device and change your network settings. To thwart any unauthorized changes, customize the device's password so it will be hard to guess.

3. Enable MAC address filtering

Linksys routers give you the ability to enable Media Access Control (MAC) address filtering. The MAC address is a unique series of numbers and letters assigned to every networking device. With MAC address filtering enabled, wireless network access is provided solely for wireless devices with specific MAC addresses. For example, you can specify the MAC address of each computer in your home so that only those computers can access your wireless network.

4. Enable encryption

Encryption protects data transmitted over a wireless network. Wi-Fi Protected Access (WPA/WPA2) and Wired Equivalent Privacy (WEP) offer different levels of security for wireless communication.

A network encrypted with WPA/WPA2 is more secure than a network encrypted with WEP, because WPA/WPA2 uses dynamic key encryption. To protect the information as it passes over the airwaves, you should enable the highest level of encryption supported by your network equipment.

WEP is an older encryption standard and may be the only option available on some older devices that do not support WPA.

General Network Security Guidelines

Wireless network security is useless if the underlying network is not secure.

- Password protect all computers on the network and individually password protect sensitive files.
- Change passwords on a regular basis.
- Install anti-virus software and personal firewall software.
- Disable file sharing (peer-to-peer). Some applications may open file sharing without your consent and/or knowledge.

Additional Security Tips

- Keep wireless routers, access points, or gateways away from exterior walls and windows.
- Turn wireless routers, access points, or gateways off when they are not being used (at night, during vacations).
- Use strong passphrases that are at least eight characters in length. Combine letters and numbers to avoid using standard words that can be found in the dictionary.

WEB: For more information on wireless security, visit **www.linksysbycisco.com/security**

Chapter 3: Advanced Configuration

After setting up the Router with the Setup Wizard (located on the CD-ROM), the Router will be ready for use. If you would like to change its advanced settings, use the Router's browser-based utility. This chapter describes each web page of the utility and each page's key functions. You can access the utility via a web browser on a computer connected to the Router.

The browser-based utility has these main tabs: Setup, Wireless, Security, Storage, Access Restrictions, Applications & Gaming, Administration, and Status. Additional tabs will be available after you click one of the main tabs.

How to Access the Browser-Based Utility

To access the browser-based utility, launch the web browser on your computer, and enter the Router's default IP address, **192.168.1.1** or **WRT610N** in the *Address* field. Then press **Enter**.

A login screen will appear. (Non-Windows XP users will see a similar screen.) Leave the *User name* field blank. Then enter the password you set up during the Setup Wizard. (If you did not run the Setup Wizard, then use the default password, **admin**. You can set a new password on the *Administration > Management* screen. Refer to **Administration > Management**, **page 30**.) Click **OK** to continue.
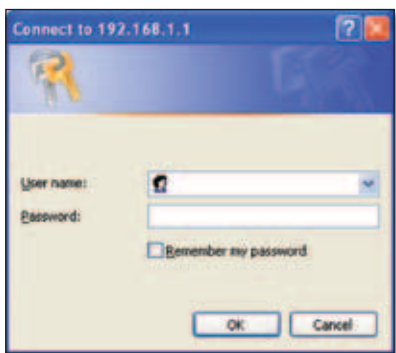
Password Screen

Setup > Basic Setup

The first screen that appears is the *Basic Setup* screen. This allows you to change the Router's general settings.

Setup > Basic Setup

Language

Language To use a different language, select one from the drop-down menu. The language of the browser-based utility will change five seconds after you select another language.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Internet Setup

The *Internet Setup* section configures the Router to your Internet connection. Most of this information can be obtained through your Internet Service Provider (ISP).

Internet Connection Type

Select the type of Internet connection your ISP provides from the drop-down menu. The available types are:

- Automatic Configuration - DHCP
- Static IP
- PPPoE
- PPTP
- L2TP
- Telstra Cable

Automatic Configuration - DHCP

The default Internet Connection Type is set to **Automatic Configuration - DHCP**. Keep the default only if your ISP supports DHCP or if you connect using a dynamic IP Address. (This option usually applies to cable connections.)

Internet Connection Type > Automatic Configuration - DHCP

Static IP

If you are required to use a permanent IP address to connect to the Internet, select **Static IP**.

Internet Connection Type > Static IP

IP Address This is the Router's IP address, when seen from the Internet. Your ISP will provide you with the IP address you need to enter here.

Subnet Mask This is the Router's Subnet Mask, as seen by users on the Internet (including your ISP). Your ISP will provide you with the Subnet Mask.

Default Gateway Your ISP will provide you with the Gateway address, which is the ISP server's IP address.

DNS Your ISP will provide you with at least one DNS (Domain Name System) server IP address.

PPPoE

Some DSL-based ISPs use PPPoE (Point-to-Point Protocol over Ethernet) to establish Internet connections. If you are connected to the Internet through a DSL line, check with your ISP to see if they use PPPoE. If they do, you will have to enable **PPPoE**.

Internet Connection Type > PPPoE

User Name and Password Enter the User Name and Password provided by your ISP.

Service Name (optional) If provided by your ISP, enter the Service Name.

Connect on Demand: Max Idle Time You can configure the Router to cut the Internet connection after it has been inactive for a specified period of time (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the Router to automatically re-establish your connection as soon as you attempt to access the Internet again. To use this option, select **Connect on Demand**. In the *Max Idle Time* field, enter the number of minutes you want to elapse before your Internet connection terminates. The default is **5** minutes.

Keep Alive: Redial Period If you select this option, the Router will periodically check your Internet connection. If you are disconnected, then the Router will automatically re-establish your connection. To use this option, select **Keep Alive**. In the *Redial Period* field, specify how often the Router should check the Internet connection. The default is **30** seconds.

PPTP

Point-to-Point Tunneling Protocol (PPTP) is a service that applies to connections in Europe only.

Internet Connection Type > PPTP

If your ISP supports DHCP or you are connecting through a dynamic IP address, then select **Obtain an IP Address Automatically**. If you are required to use a permanent IP address to connect to the Internet, then select **Specify an IP Address**. Then configure the following:

Internet IP Address This is the Router's IP address, as seen from the Internet. Your ISP will provide you with the IP Address you need to specify here.

Subnet Mask This is the Router's Subnet Mask, as seen by users on the Internet (including your ISP). Your ISP will provide you with the Subnet Mask.

Default Gateway Your ISP will provide you with the Gateway address, which is the ISP server's IP address.

DNS Your ISP will provide you with at least one DNS (Domain Name System) Server IP address.

Server IP Address Your ISP will provide you with the Server IP Address.

User Name and Password Enter the User Name and Password provided by your ISP.

Connect on Demand: Max Idle Time You can configure the Router to cut the Internet connection after it has been inactive for a specified period of time (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the Router to automatically re-establish your connection as soon as you attempt to access the Internet again. To use this option, select **Connect on Demand**. In the *Max Idle Time* field, enter the number of minutes you want to elapse before your Internet connection terminates. The default is **5** minutes.

Keep Alive: Redial Period If you select this option, the Router will periodically check your Internet connection. If you are disconnected, then the Router will automatically re-establish your connection. To use this option, select **Keep Alive**. In the *Redial Period* field, specify how often the Router should check the Internet connection. The default is **30** seconds.

L2TP

L2TP is a service that applies to connections in Israel only.

Internet Connection Type > L2TP

Server IP Address This is the IP address of the L2TP Server. Your ISP will provide you with the IP Address you need to specify here.

User Name and Password Enter the User Name and Password provided by your ISP.

Connect on Demand: Max Idle Time You can configure the Router to cut the Internet connection after it has been inactive for a specified period of time (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the Router to automatically re-establish your connection as soon as you attempt to access the Internet again. To use this option, select **Connect on Demand**. In the *Max Idle Time* field, enter the number of minutes you want to elapse before your Internet connection terminates. The default is **5** minutes.

Keep Alive: Redial Period If you select this option, the Router will periodically check your Internet connection. If you are disconnected, then the Router will automatically re-establish your connection. To use this option, select **Keep Alive**. In the *Redial Period* field, specify how often the Router should check the Internet connection. The default is **30** seconds.

Telstra Cable

Telstra Cable is a service that applies to connections in Australia only.

Internet Connection Type > Telstra Cable

Server IP Address This is the IP address of the Telstra Cable. Your ISP will provide you with the IP Address you need to specify here.

User Name and Password Enter the User Name and Password provided by your ISP.

Optional Settings

Some of these settings may be required by your ISP. Verify with your ISP before making any changes.

Optional Settings

Host Name/Domain Name These fields allow you to supply a host and domain name for the Router. Some ISPs, usually cable ISPs, require these names as identification. You may have to check with your ISP to see if your broadband Internet service has been configured with a host and domain name. In most cases, leaving these fields blank will work.

MTU MTU is the Maximum Transmission Unit. It specifies the largest packet size permitted for Internet transmission. Select Manual if you want to manually enter the largest packet size that is transmitted. To have the Router select the best MTU for your Internet connection, keep the default setting, **Auto**.

Size   When Manual is selected in the *MTU* field, this option is enabled. Leave this value in the 1200 to 1500 range. The default size depends on the Internet Connection Type:

- DHCP, Static IP, or Telstra: **1500**
- PPPoE: **1492**
- PPTP or L2TP: **1460**

Network Setup

The *Network Setup* section changes the settings on the network connected to the Router's Ethernet ports. Wireless Setup is performed through the Wireless tab (refer to **Wireless > Basic Wireless Settings**, **page 12**).

Router Address

This presents both the Router's IP Address and Subnet Mask, as seen by your network. The default Router IP address is **192.168.1.1**.

Router IP Address

DHCP Server Settings

The settings allow you to configure the Router's Dynamic Host Configuration Protocol (DHCP) server function. The Router can be used as a DHCP server for your network. A DHCP server automatically assigns an IP address to each computer on your network. If you choose to enable the Router's DHCP server option, make sure there is no other DHCP server on your network.

Network Address Server Settings (DHCP)

DHCP Server   DHCP is enabled by factory default. If you already have a DHCP server on your network, or you do not want a DHCP server, then select **Disabled** (no other DHCP features will be available).

DHCP Reservation   Click **DHCP Reservation** if you want to assign a fixed local IP address to a MAC address.

DHCP Reservation

You will see a list of DHCP clients with the following information: Client Name, Interface, IP Address, and MAC Address.

DHCP Reservation

- **Select Clients from DHCP Table** Click the **Select** check box to reserve a client's IP address. Then click **Add Clients**.
- **Manually Adding Client** To manually assign an IP address, enter the client's name in the *Enter Client Name* field. Enter the IP address you want it to have in the *Assign IP Address* field. Enter its MAC address in the *To This MAC Address* field. Then click **Add**.

Clients Already Reserved

A list of DHCP clients and their fixed local IP addresses will be displayed at the bottom of the screen. If you want to remove a client from this list, click **Remove**.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes. To update the on-screen information, click **Refresh**. To exit this screen, click **Close**.

Start IP Address   Enter a value for the DHCP server to start with when issuing IP addresses. Because the Router's default IP address is **192.168.1.1**, the Start IP Address must be 192.168.1.2 or greater, but smaller than 192.168.1.253. The default is **192.168.1.100**.

Maximum Number of Users Enter the maximum number of computers that you want the DHCP server to assign IP addresses to. This number cannot be greater than 253. The default is **50**.

**IP Address Range**   The range of available IP addresses is displayed.

Client Lease Time   The Client Lease Time is the amount of time a network user will be allowed connection to the Router with their current dynamic IP address. Enter the amount of time, in minutes, that the user will be "leased" this dynamic IP address. After the time is up, the user will be automatically assigned a new dynamic IP address, or

the lease will be renewed. The default is **0** minutes, which means one day.

Static DNS (1-3) The Domain Name System (DNS) is how the Internet translates domain or website names into Internet addresses or URLs. Your ISP will provide you with at least one DNS Server IP Address. If you wish to use another, enter that IP Address in one of these fields. You can enter up to three DNS Server IP Addresses here. The Router will use these for quicker access to functioning DNS servers.

WINS The Windows Internet Naming Service (WINS) manages each computer's interaction with the Internet. If you use a WINS server, enter that server's IP address here. Otherwise, leave this blank.

Time Setting
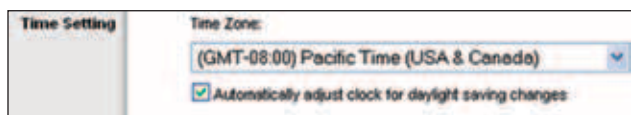
Time Setting

Time Zone Select the time zone in which your network functions from this drop-down menu.

Automatically adjust clock for daylight saving changes Select this option to have the Router automatically adjust for daylight saving time.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Setup > DDNS

The Router offers a Dynamic Domain Name System (DDNS) feature. DDNS lets you assign a fixed host and domain name to a dynamic Internet IP address. It is useful when you are hosting your own website, FTP server, or other server behind the Router.

Before you can use this feature, you need to sign up for DDNS service with a DDNS service provider, **www.dyndns.org** or **www.tzo.com**. If you do not want to use this feature, keep the default, **Disabled**.

DDNS

DDNS Service

If your DDNS service is provided by DynDNS.org, then select **DynDNS.org** from the drop-down menu. If your DDNS service is provided by TZO, then select **TZO.com**. The features available on the *DDNS* screen will vary, depending on which DDNS service provider you use.

DynDNS.org

Setup > DDNS > DynDNS

User Name Enter the User Name for your DDNS account.

Password Enter the Password for your DDNS account.

Host Name The DDNS URL assigned by the DDNS service is displayed.

WildCard Select **Enabled** to enable this feature or **Disabled** to disable it.

Internet IP Address The Router's Internet IP address is displayed here. Because it is dynamic, it will change.

Status The status of the DDNS service connection is displayed.

Update   To manually trigger an update, click **Update**.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

TZO.com

Setup > DDNS > TZO

E-mail Address, TZO Password, and Domain Name Enter the settings of the account you set up with TZO.

Internet IP Address The Router's Internet IP address is displayed here. Because it is dynamic, it will change.

Status The status of the DDNS service connection is displayed.

Update To manually trigger an update, click **Update**.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Setup > MAC Address Clone

Some ISPs will require you to register a MAC address in order to access the Internet. A MAC address is a 12-digit code assigned to a unique piece of hardware for identification. If you do not wish to re-register the MAC address with your ISP, you can use the MAC Address Clone feature to assign the currently registered MAC address to the Router.

Setup > MAC Address Clone

MAC Address Clone

**Enabled/Disabled** To have the MAC address cloned, select **Enabled**.

MAC Address Enter the MAC address registered with your ISP here.

Clone My PC's MAC Click this button to clone the MAC address of the computer you are using.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Setup > Advanced Routing

This screen is used to set up the Router's advanced functions. Operating Mode allows you to select the type(s) of advanced functions you use. Dynamic Routing automatically adjusts how packets travel on your network. Static Routing sets up a fixed route to another network destination.
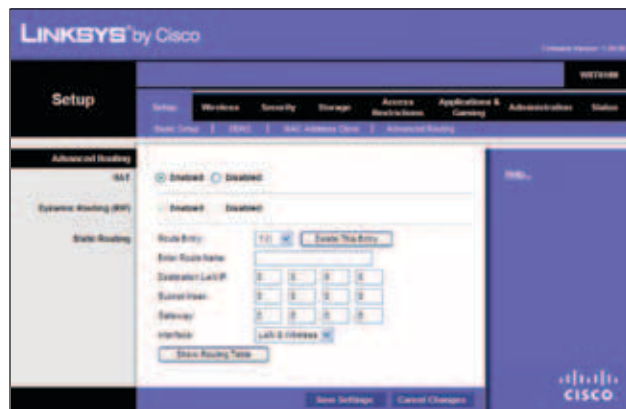
Setup > Advanced Routing

Advanced Routing

NAT

Enabled/Disabled If this Router is hosting your network's connection to the Internet, keep the default, **Enabled**. If another router exists on your network, select **Disabled**. When the NAT setting is disabled, dynamic routing will be enabled.

Dynamic Routing (RIP)

Enabled/Disabled This feature enables the Router to automatically adjust to physical changes in the network's layout and exchange routing tables with the other router(s). The Router determines the network packets' route based on the fewest number of hops between the source and the destination. When the NAT setting is enabled, the Dynamic Routing feature is automatically disabled. When the NAT setting is disabled, this feature is available. Select **Enabled** to use the Dynamic Routing feature.

Static Routing

A static route is a pre-determined pathway that network information must travel to reach a specific host or network. Enter the information described below to set up a new static route.

Route Entry To set up a static route between the Router and another network, select a number from the drop-down list. Click **Delete This Entry** to delete a static route.

Enter Route Name Enter a name for the Route here, using a maximum of 25 alphanumeric characters.

Destination LAN IP The Destination LAN IP is the address of the remote network or host to which you want to assign a static route.

Subnet Mask The Subnet Mask determines which portion of a Destination LAN IP address is the network portion, and which portion is the host portion.

Gateway This is the IP address of the gateway device that allows for contact between the Router and the remote network or host.

Interface This interface tells you whether the Destination IP Address is on the **LAN & Wireless** (Ethernet and wireless networks) or the **WAN (Internet)**.

Click **Show Routing Table** to view the static routes you have already set up.

Routing Table

Routing Table

> For each route, the Destination LAN IP address, Subnet Mask, Gateway, and Interface are displayed. Click **Refresh** to update the information. Click **Close** to exit this screen.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Wireless > Basic Wireless Settings

The basic settings for wireless networking are set on this screen.

There are two ways to configure the Router's wireless network(s), manual and Wi-Fi Protected Setup.

Wi-Fi Protected Setup is a feature that makes it easy to set up your wireless network. If you have client devices, such as wireless adapters, that support Wi-Fi Protected Setup, then you can use Wi-Fi Protected Setup.

Simultaneous Networks

For more wireless bandwidth, the Router can create two simultaneous yet separate Wireless-N networks, one using the Wireless-N 5 GHz band and one using the Wireless-N 2.4 GHz band. You can use Wi-Fi Protected Setup to easily configure and connect to both networks (refer to **Wi-Fi Protected Setup**, **page 13**), or you can manually configure the Router.

If you use manual configuration, then set up each network with the following:

- Unique Network Name (SSID)
- Wireless security settings (refer to **5 GHz or 2.4 GHz Wireless Security**, **page 14**)

Decide which computers and other wireless devices should join which network. Wireless-N devices support both the 5 GHz and 2.4 GHz bands, so they can join either the 5 GHz or 2.4 GHz network. Wireless-G and Wireless-B devices support only the 2.4 GHz band, so they should join the 2.4 GHz network. Wireless-A devices support only the 5 GHz band, so they should join the 5 GHz network.

For the 5 GHz network, configure all computers and other wireless devices with the same 5 GHz Network Name (SSID) and wireless security settings. For the 2.4 GHz network, configure all computers and other wireless devices with the same 2.4 GHz Network Name (SSID) and wireless security settings.

NOTE: Make sure each network uses a unique Network Name (SSID).

Wireless > Basic Wireless Settings

Configuration View To manually configure your wireless networks, select **Manual**. Proceed to the *Wireless Configuration (Manual)* section. To use Wi-Fi Protected Setup, select **Wi-Fi Protected Setup**. Proceed to **Wi-Fi Protected Setup**, **page 13**.

Wireless Configuration (Manual)

If you set the *Configuration View* to **Manual**, the *Basic Wireless Settings* screen displays the following fields.

5 GHz or 2.4 GHz Wireless Settings

The same settings are available for the 5 GHz and 2.4 GHz radio bands. The 5 GHz Wireless settings set up a network using the 5 GHz band, and the 2.4 GHz Wireless settings set up a network using the 2.4 GHz band.

Network Mode (5 GHz) Select the wireless standards running on your 5 GHz network. If you have both Wireless-A and Wireless-N (5 GHz) devices in your network, keep the default, **Mixed**. If you have only Wireless-A devices, select **Wireless-A Only**. If you have only Wireless-N (5 GHz)

devices, select **Wireless-N Only.** If you do not have any Wireless-A and Wireless-N (5GHz) devices in your network, select **Disabled**.

Network Mode (2.4 GHz) Select the wireless standards running on your 2.4 GHz network. If you have both Wireless-B, Wireless-G and Wireless-N (2.4 GHz) devices in your network, keep the default, **Mixed**. If you have only Wireless-B devices, select **Wireless-B Only**. If you have only Wireless-G devices, select **Wireless-G Only**. If you have only Wireless-N (2.4 GHz) devices, select **Wireless-N Only**. If you do not have any Wireless-B, Wireless-G and Wireless-N (2.4 GHz) devices in your network, select **Disabled**.

Network Name (SSID) The SSID is the network name shared by all devices in a wireless network. It is case-sensitive and must not exceed 32 keyboard characters. For added security, you should change the default network name to a unique name.

Channel Width (5 GHz) For best performance in a network using Wireless-A and Wireless-N (5 GHz) devices, keep the default, **Auto (20MHz or 40MHz)**. For a channel width of 40 MHz, select **40MHz only**. For a channel width of 20 MHz, select **20MHz only**.

Channel Width (2.4 GHz) For best performance in a network using Wireless-B, Wireless-G and Wireless-N (2.4 GHz) devices, select **Auto (20MHz or 40MHz)**. For a channel width of 40 MHz, select **40MHz only**. For a channel width of 20 MHz, keep the default, **20MHz only**.

Wide Channel (5 GHz) If you selected 40MHz only or Auto (20MHz or 40MHz) for the Channel Width setting, then this setting will be available for your primary Wireless-N (5GHz) channel. If you are not sure which channel to select, keep the default, **Auto**.

Wide Channel (2.4 GHz) If you selected 40MHz only or Auto (20MHz or 40MHz) for the Channel Width setting, then this setting will be available for your primary Wireless-N (2.4 GHz) channel. If you are not sure which channel to select, keep the default, **Auto**.

Standard Channel (5 GHz) Select the channel for Wireless-A and Wireless-N (5GHz) networking. If you selected 40MHz only or Auto (20MHz or 40MHz) for the Channel Width setting, then the Standard Channel will be a secondary channel for Wireless-N (5GHz). If you are not sure which channel to select, keep the default, **Auto**.

Standard Channel (2.4 GHz) Select the channel for Wireless-B, Wireless-G, and Wireless-N (2.4 GHz) networking. If you selected 40MHz only or Auto (20MHz or 40MHz) for the Channel Width setting, then the Standard Channel will be a secondary channel for Wireless-N (2.4 GHz). If you are not sure which channel to select, keep the default, **Auto**.

SSID Broadcast When wireless clients survey the local area for wireless networks to associate with, they will detect the SSID broadcast by the Router. To broadcast the Router's SSID, keep the default, **Enabled**. If you do not want to broadcast the Router's SSID, then select **Disabled**.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Wi-Fi Protected Setup

There are three methods available. Use the method that applies to the client device you are configuring.

Wireless > Basic Wireless Settings (Wi-Fi Protected Setup)

NOTE: Wi-Fi Protected Setup configures one client device at a time. Repeat the instructions for each client device that supports Wi-Fi Protected Setup.

Method #1 Use this method if your client device has a Wi-Fi Protected Setup button.

1. Click or press the **Wi-Fi Protected Setup** button on the client device.
2. Click the **Wi-Fi Protected Setup** button on the Router's *Wi-Fi Protected Setup* screen.
3. After the client device has been configured, click **OK** on the Router's *Wi-Fi Protected Setup* screen. Then refer back to your client device or its documentation for further instructions.

Method #2 Use this method if your client device has a Wi-Fi Protected Setup PIN number.

1. Enter the PIN number from the client device in the field on the Router's *Wi-Fi Protected Setup* screen.
2. Click the **Register** button on the Router's *Wi-Fi Protected Setup* screen.

3. After the client device has been configured, click **OK** on the Router's *Wi-Fi Protected Setup* screen. Then refer back to your client device or its documentation for further instructions.

Method #3 Use this method if your client device asks for the Router's PIN number.

1. On the client device, enter the PIN number listed on the Router's *Wi-Fi Protected Setup* screen. (It is also listed on the label on the bottom of the Router.)

2. After the client device has been configured, click **OK** on the Router's *Wi-Fi Protected Setup* screen. Then refer back to your client device or its documentation for further instructions.

The Wi-Fi Protected Setup Status, Network Name (SSID), Security, and Passphrase are displayed at the bottom of the screen.

NOTE: If you have client devices that do not support Wi-Fi Protected Setup, note the wireless settings, and then manually configure those client devices.

Wireless > Wireless Security

The wireless security settings configure the security of your wireless network(s). The Router supports the following wireless security options: WPA2 Personal, WPA Personal, WPA2 Enterprise, WPA Enterprise, RADIUS, and WEP. WPA (Wi-Fi Protected Access) is a stronger security standard than WEP (Wireless Equivalent Privacy), and WPA2 is even more secure than WPA. RADIUS is Remote Authentication Dial-In User Service.

5 GHz or 2.4 GHz Wireless Security

Wireless security is strongly recommended, and WPA2 is the strongest method available. Use WPA2 if it is supported by all of your wireless devices.

Security Mode

Select the security method for each wireless network. If you do not want to use wireless security, keep the default, **Disabled**.

WPA2 Personal

NOTE: If you are using WPA2 or WPA, each device in your wireless network MUST use the same WPA method and shared key, or else the network will not function properly.

WPA2 Personal

Encryption WPA2 supports two encryption methods with dynamic encryption keys, AES or WPA-TKIP/WPA2-AES. The default is **AES**.

Passphrase Enter a passphrase of 8-63 characters.

Key Renewal Enter a Key Renewal period, which instructs the Router how often it should change the encryption keys. The default is **3600** seconds.

WPA Personal

NOTE: If you are using WPA2 or WPA, each device in your wireless network MUST use the same WPA method and shared key, or else the network will not function properly.

WPA Personal

Encryption WPA uses TKIP, an encryption method with dynamic encryption keys.

Passphrase Enter a passphrase of 8-63 characters.

Key Renewal Enter a Key Renewal period, which instructs the Router how often it should change the encryption keys. The default period is **3600** seconds.

WPA2 Enterprise

This option features WPA2 used in coordination with a RADIUS server. (This should only be used when a RADIUS server is connected to the Router.)

WPA2 Enterprise

Encryption WPA2 supports two encryption methods with dynamic encryption keys, AES or WPA-TKIP/WPA2-AES. The default is **AES**.

RADIUS Server Enter the IP address of the RADIUS server.

RADIUS Port Enter the port number of the RADIUS server. The default is **1812**.

Shared Key Enter the key shared between the Router and the server.

Key Renewal Enter a Key Renewal period, which instructs the Router how often it should change the encryption keys. The default is **3600** seconds.

WPA Enterprise

This option features WPA used in coordination with a RADIUS server. (This should only be used when a RADIUS server is connected to the Router.)

WPA Enterprise

Encryption WPA uses TKIP, an encryption method with dynamic encryption keys.

RADIUS Server Enter the IP address of the RADIUS server.

RADIUS Port Enter the port number of the RADIUS server. The default is **1812**.

Shared Key Enter the key shared between the Router and the server.

Key Renewal Enter a Key Renewal period, which instructs the Router how often it should change the encryption keys. The default is **3600** seconds.

RADIUS

This option features WEP used in coordination with a RADIUS server. (This should only be used when a RADIUS server is connected to the Router.)

IMPORTANT: If you are using WEP encryption, each device in your wireless network MUST use the same WEP encryption method and encryption key, or else your wireless network will not function properly.

RADIUS

RADIUS Server Enter the IP address of the RADIUS server.

RADIUS Port Enter the port number of the RADIUS server. The default is **1812**.

Shared Key Enter the key shared between the Router and the server.

Encryption Select a level of WEP encryption, **64 bits 10 hex digits** or **128 bits 26 hex digits**. The default is **64 bits 10 hex digits**.

Passphrase Enter a Passphrase to automatically generate WEP keys. Then click **Generate**.

Key 1-4 If you did not enter a Passphrase, enter the WEP key(s) manually.

TX Key Select a default TX (Transmit) Key (choose which Key to use). The default is **1**.

WEP

WEP is a basic encryption method, which is not as secure as WPA.

IMPORTANT: If you are using WEP encryption, each device in your wireless network MUST use the same WEP encryption method and encryption key, or else your wireless network will not function properly.

WEP

Encryption Select a level of WEP encryption, **64 bits 10 hex digits** or **128 bits 26 hex digits**. The default is **64 bits 10 hex digits**.

**Passphrase** Enter a Passphrase to automatically generate WEP keys. Then click **Generate**.

Key 1-4 If you did not enter a Passphrase, enter the WEP key(s) manually.

TX Key Select a default TX (Transmit) Key (choose which Key to use). The default is **1**.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Wireless > Wireless MAC Filter

Wireless access can be filtered (restricted) by specifying the MAC addresses of the devices in your wireless network.
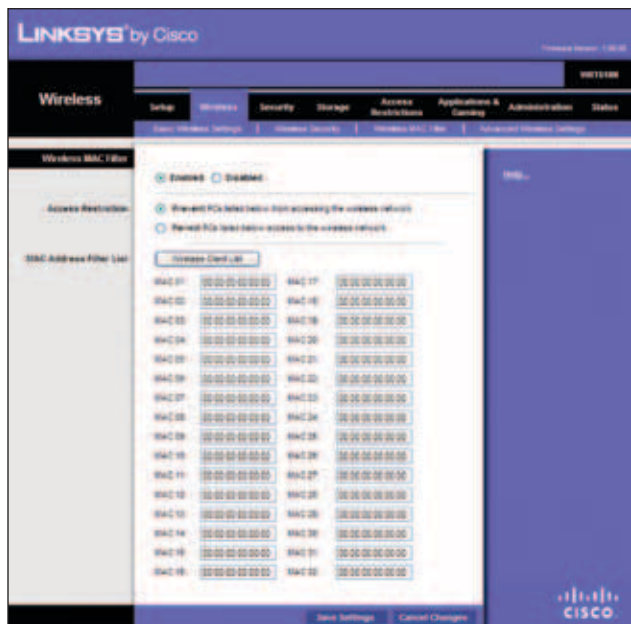
Wireless > Wireless MAC Filter

Wireless MAC Filter

Enabled/Disabled To filter wireless users by MAC address, either permitting or blocking access, click **Enabled**. If you do not wish to filter users by MAC address, keep the default setting, **Disabled**.

Access Restriction

Prevent PCs listed below from accessing the wireless network Select this to block wireless access by MAC address. This option is enabled by default.

Permit PCs listed below access to the wireless network Select this to allow wireless access by MAC address. This option is disabled by default.

MAC Address Filter List

Wireless Client List Click this to open the *Wireless Client List* screen.

Wireless Client List

Wireless Client List

This screen shows computers and other devices on the wireless network. The list can be sorted by Client Name, Interface, IP Address, MAC Address, and Status.

Select **Save to MAC Address Filter List** for any device you want to add to the MAC Address Filter List. Then click **Add**.

To update the on-screen information, click **Refresh**. To exit this screen and return to the *Wireless MAC Filter* screen, click **Close**.

MAC XX Enter the MAC addresses of the devices whose wireless access you want to control.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Wireless > Advanced Wireless Settings

The *Advanced Wireless Settings* screen is used to set up the Router's advanced wireless functions. These settings should only be adjusted by an advanced user because incorrect settings can reduce wireless performance. In most cases, keep the default settings.

Wireless > Advanced Wireless Settings

Advanced Wireless

AP Isolation This isolates all wireless clients and wireless devices on your network from each other. Wireless devices will be able to communicate with the Router but not

with each other. To use this function, select **Enabled**. AP Isolation is disabled by default.

Frame Burst Enabling this option should provide your network with greater performance, depending on the manufacturer of your wireless products. To use the Frame Burst option, keep the default, **Enabled**.

Authentication Type The default is **Auto**, which allows either Open System or Shared Key authentication to be used. With **Open System** authentication, the sender and the recipient do NOT use a WEP key for authentication. With **Shared Key** authentication, the sender and recipient use a WEP key for authentication.

Basic Rate The Basic Rate setting is not actually one rate of transmission but a series of rates at which the Router can transmit. (The Basic Rate is not the actual rate of data transmission. If you want to specify the Router's rate of data transmission, configure the Transmission Rate setting.) The Router will advertise its Basic Rate to the other wireless devices in your network, so they know which rates will be used. The Router will also advertise that it will automatically select the best rate for transmission. The default setting is **Default**, for transmission at all standard wireless rates (1-2 Mbps, 5.5 Mbps, 11 Mbps, 18 Mbps, and 24 Mbps).

Transmission Rate The rate of data transmission should be set depending on the speed of your wireless network. You can select from a range of transmission speeds, or you can select **Auto** to have the Router automatically use the fastest possible data rate and enable the Auto-Fallback feature. Auto-Fallback will negotiate the best possible connection speed between the Router and a wireless client. The default value is **Auto**.

N Transmission Rate The rate of data transmission should be set depending on the speed of your Wireless-N networking. You can select from a range of transmission speeds, or you can select Auto to have the Router automatically use the fastest possible data rate and enable the Auto-Fallback feature. Auto-Fallback will negotiate the best possible connection speed between the Router and a wireless client. The default is **Auto**.

Transmission Power Select the appropriate level of transmission power: **High**, **Medium**, or **Low**. In most cases, keep the default, **High**.

CTS Protection Mode The Router automatically uses CTS (Clear-To-Send) Protection Mode when your Wireless-N and Wireless-G devices are experiencing severe problems and are not able to transmit to the Router in an environment with heavy 802.11b traffic. This option boosts the Router's ability to catch all Wireless-N and Wireless-G transmissions but severely decreases performance. To use this option, keep the default, **Auto**. To disable this option, select **Disabled**.

Beacon Interval A beacon is a packet broadcast by the Router to synchronize the wireless network. Enter a value between 20 and 1000 milliseconds. The Beacon Interval value indicates the frequency interval of the beacon. The default value is **100**.

DTIM Interval This value, between 3 and 255, indicates the interval of the Delivery Traffic Indication Message (DTIM). A DTIM field is a countdown field informing clients of the next window for listening to broadcast and multicast messages. When the Router has buffered broadcast or multicast messages for associated clients, it sends the next DTIM with a DTIM Interval value. Its clients hear the beacons and awaken to receive the broadcast and multicast messages. The default value is **3**.

Fragmentation Threshold This value specifies the maximum size for a packet before data is fragmented into multiple packets. If you experience a high packet error rate, you may slightly increase the Fragmentation Threshold. Setting the Fragmentation Threshold too low may result in poor network performance. Only minor reduction of the default value is recommended. In most cases, it should remain at its default value of **2346**.

RTS Threshold Should you encounter inconsistent data flow, only minor reduction of the default value, **2347**, is recommended. If a network packet is smaller than the preset RTS threshold size, the RTS/CTS mechanism will not be enabled. The Router sends Request to Send (RTS) frames to a particular receiving station and negotiates the sending of a data frame. After receiving an RTS, the wireless station responds with a Clear to Send (CTS) frame to acknowledge the right to begin transmission. The RTS Threshold value should remain at its default value of **2347**.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Security > Firewall

The *Firewall* screen is used to configure a firewall that can filter out various types of unwanted traffic on the Router's local network.
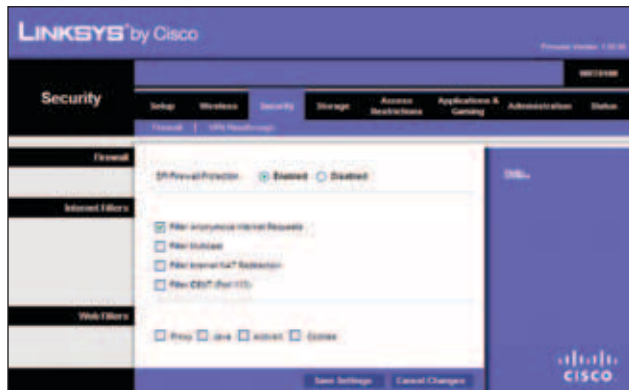
Security > Firewall

Firewall

SPI Firewall Protection To use firewall protection, keep the default selection, **Enabled**. To turn off firewall protection, select **Disabled**.

Internet Filters

Filter Anonymous Internet Requests This feature makes it more difficult for outside users to work their way into your network. This option is enabled by default. Disable it to allow anonymous Internet requests.

Filter Multicast Multicasting allows for multiple transmissions to specific recipients at the same time. If multicasting is permitted, then the Router will allow IP multicast packets to be forwarded to the appropriate computers. Select this option to enable the filter.

Filter Internet NAT Redirection This feature is used to prevent a local computer from using a URL or Internet address to access the local server. Select this option to enable the filter.

Filter IDENT (Port 113) This feature keeps port 113 from being scanned by devices outside of your local network. Select this option to enable the filter.

Web Filters

Proxy Use of WAN proxy servers may compromise the Gateway's security. Denying Proxy will disable access to any WAN proxy servers. Select this option to enable proxy filtering. Deselect the feature to allow proxy access.

Java Java is a programming language for websites. If you deny Java, you run the risk of not having access to Internet sites created using this programming language. Select this option to enable Java filtering. Deselect the feature to allow Java usage.

ActiveX ActiveX is a programming language for websites. If you deny ActiveX, you run the risk of not having access to Internet sites created using this programming language. Select this option to enable ActiveX filtering. Deselect the feature to allow ActiveX usage.

Cookies A cookie is data stored on your computer and used by Internet sites when you interact with them. Select this option to filter cookies. Deselect the feature to allow cookie usage.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Security > VPN Passthrough

The *VPN Passthrough* screen allows you to enable VPN tunnels using IPSec, L2TP, or PPTP protocols to pass through the Router's firewall.

Security > VPN Passthrough

VPN Passthrough

IPSec Passthrough Internet Protocol Security (IPSec) is a suite of protocols used to implement secure exchange of packets at the IP layer. To allow IPSec tunnels to pass through the Router, keep the default, **Enabled**.

L2TP Passthrough Layer 2 Tunneling Protocol is the method used to enable Point-to-Point sessions via the Internet on the Layer 2 level. To allow L2TP tunnels to pass through the Router, keep the default, **Enabled**.

PPTP Passthrough Point-to-Point Tunneling Protocol (PPTP) allows the Point-to-Point Protocol (PPP) to be tunneled through an IP network. To allow PPTP tunnels to pass through the Router, keep the default, **Enabled**.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Storage > Disk

The storage options are available when a USB storage device is connected to the USB port of the Router.

The *Disk* screen describes the disk currently attached to the Router. Use this screen to create shared folders, safely remove a disk, or format a disk (any data on the disk will be deleted during formatting).

Shared folders are folders you create to manage access to the folders on the disk.

Storage > Disk

Disk Detail

If a formatted disk is connected to the Router, then its name is displayed. For each partition of the disk, the Partition, File System, Capacity, and Free Space information are displayed.

Safely Remove Disk Before physically disconnecting a disk from the Router, click **Safely Remove Disk** first. This prevents the possible loss of data, which may occur if you remove the disk while it is transferring data.

Create Share To create a shared folder, click this option for the appropriate partition, and the *Shared Folder* screen appears. Proceed to **Create or Edit a Shared Folder**, **page 20**.

Shared Folder

Shared Disk IP Address The IP address of the disk is displayed.

Summary To view a list of shared folders, click this option.

For each shared folder, the Display Name, Partition, and Shared Folder location are displayed.

Edit To change the access settings of a shared folder, click this option, and the *Shared Folder* screen appears. Proceed to **Create or Edit a Shared Folder**, **page 20**.

Delete To delete a shared folder, click this option.

Format Disk

Disk To format a disk and create a new partition, select the disk you want to format, and then click **Format Disk**. (If your disk was formatted with multiple partitions, then the formatting will delete them and create a single partition.) Proceed to **Format Disk**, **page 21**.

Create or Edit a Shared Folder

Use this screen to add a shared folder.
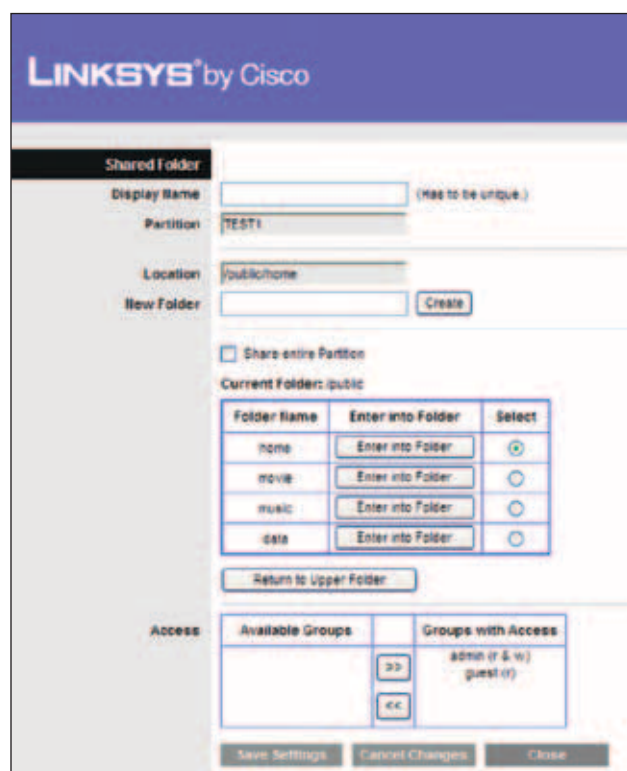
Shared Folder

Shared Folder

Display Name Create a name for the folder. This will appear in the Shared Folder table on the *Disk* screen.

Partition The name of the partition is displayed.

Location The location of the folder is displayed.

New Folder Create a name for the physical location of the folder. Then click **Create**.

Share entire Partition Select this option if the folder should include the entire partition.

If you do not want to share the entire partition, then select the folder you do want to share.

Current Folder   The current folder is displayed.

Folder Name   The available folders are listed by Folder Name.

Enter into Folder   To display sub-folders, click this button.

Select   Select a folder.

Return to Upper Folder   To return to the previous folder, click this button.

Access

Specify which user groups have read-and-write or read-only access to the folder. (To create user groups, refer to **Create or Edit a Group Account**, **page 24**.)

Available Groups   To allow a group access to the folder, select it, and then click the **>>** button.

Groups with Access   To block a group from accessing the folder, select it, and then click the **<<** button.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes. Click **Close** to exit the screen.

Format Disk

Enter a partition's name   Create a name for the partition. (If your disk was formatted with multiple partitions, then the formatting will delete them and create a single partition.)

To format the disk as FAT32, click **Format** and follow the on-screen instructions. To cancel the formatting, click **Cancel**.

Format Disk

Storage > Media Server

The storage options are available when a USB storage device is connected to the USB port of the Router.

If you have UPnP AV-enabled (or DLNA-certified) devices in your home, then you can use the Router as a media server. Examples of UPnP AV-enabled devices include a digital media adapter, a gaming console with a built-in media player, or a digital picture frame.

For example, if you have a digital media adapter that sends content to your entertainment system, then the digital media adapter can locate the Router using the UPnP AV standard. The folders you specify can then be accessed and played by the digital media adapter.

Storage > Media Server

Setup

Server Name   The default server name of the Router is **WRT610N**.

UPnP Media Server   To use the Router's media server function, select **Enabled**. Otherwise, select **Disabled**.

Database

This section lets you select content to add to the database of the Router's media server.

Specify Folder to Scan   To add a media folder to the database of the Router's media server, click this button. The *Media Folder* screen appears. Proceed to **Add a Media Folder**, **page 22**.

Last scanning time   The last time the media server scanned for content is displayed.

Auto-scan every __   To automatically scan the media folders, select this option. Then select the appropriate interval: **2 Hours** (default), **6 Hours**, **12 Hours**, **24 Hours**, or **48 Hours**.

Scan All   To scan all media files, click this button.

The database table lists the media folders with the following information: Display Name, Partition, and Folder.

Scan   To scan a folder, click **Scan**.

Delete   To delete a folder, click **Delete**.

Add a Media Folder

Use this screen to add a media folder.

Media Folder

Media Folder

Display Name Create a name for the folder. This will appear in the Database table on the *Media Server* screen.

Partition The name of the partition is displayed.

Location The location of the folder is displayed.

New Folder Create a name for the physical location of the folder. Then click **Create**.

Share entire Partition Select this option if the folder should include the entire partition.

If you do not want to share the entire partition, then select the folder you do want to share.

Current Folder The current folder is displayed.

Folder Name The available folders are listed by Folder Name.

Enter into Folder To display sub-folders, click this button.

Select Select a folder.

Return to Upper Folder To return to the previous folder, click this button.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes. Click **Close** to exit the screen.

On the *Media Server* screen, click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Storage > FTP Server

The storage options are available when a USB storage device is connected to the USB port of the Router.

The FTP Server tab creates an FTP server that can be accessed from the Internet or your local network.

Storage> FTP Server

Setup

Server Name The default server name of the Router is **WRT610N**.

FTP Server Select **Enabled** to use the Router as an FTP server. Otherwise, select **Disabled**. An external USB hard drive or USB disk must be connected to the USB port to use this service.

Internet Access Select **Enabled** to allow access of the FTP server from the Internet. Otherwise, select **Disabled** to only allow local network access.

FTP Port Enter the FTP Port number to use. The default is **21**.

Access

This section lets you add FTP folders that can be accessed through the FTP client.

Specify Folder to Access To add an FTP folder to the Access table, click this button. The *FTP Folder* screen appears. Proceed to **Create or Edit an FTP Folder**, **page 23**.

Summary To view a list of FTP folders, click this option.

For each FTP folder, the Display Name, Partition, and Folder location are displayed.

The database table lists the FTP folders with the following information: Display Name, Partition, and Folder.

Edit To change the access settings of an FTP folder, click this option, and the *FTP Folder* screen appears. Proceed to **Create or Edit an FTP Folder**, **page 23**.

Delete To delete an FTP folder, click this option.

Create or Edit an FTP Folder

Use this screen to add an FTP folder.

FTP Folder Screen

Display Name Create a name for the folder. Enter a display name that will appear in the Access table of the *FTP Server* screen.

Partition The name of the partition is displayed.

Location The location of the folder is displayed.

New Folder Create a name for the physical location of the folder. Then click **Create**.

Share entire Partition Select this option if the folder should include the entire partition.

If you do not want to share the entire partition, then select the folder you do want to share.

Current Folder The current folder is displayed.

Folder The available folders are listed by Folder name.

Enter into Folder To display sub-folders, click this button.

Select Select a folder.

Return to Upper Folder To return to the previous folder, click this button.

Access

Specify which user groups have read-and-write or read-only access to the folder. (To create user groups, refer to **Create or Edit a Group Account**, **page 24**.)

Available Groups To allow a group access to the folder, select it, and then click the **>>** button.

Groups with Access To block a group from accessing the folder, select it, and then click the **<<** button.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes. Click **Close** to exit the screen.

On the *FTP Server* screen, click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Storage > Administration

The *Administration* screen allows you to manage the user groups and individual users who can access the shared folders.

Storage > Administration

Information

Server Name The default server name of the Router is **WRT610N**.

Workgroup Name Enter the workgroup name for the Router; it should match the workgroup name of the computers on your local network. The Router's default is **workgroup**.

Server LAN IP Address The local IP address of the Router's media and FTP server is displayed.

Server Internet IP Address The Internet IP address of the Router's FTP server is displayed.

User Management

By default the Router creates two users, **admin** and **guest**.

The users are listed by User Name and Group.

Create New User To create a new user, click this button. The *User Account* screen appears. Proceed to **Create or Edit a User Account**, page 24.

Edit To change the settings of a user account, click **Edit**, and the *User Account* screen appears. Proceed to **Create or Edit a User Account**, page 24.

Delete To delete a user, click this button.

Group Management

By default the Router creates two user groups, **admin** and **guest**.

The groups are listed by Group Name and Access level. There are two levels of access, r & w (read-and-write) and r (read-only).

Create New Group To create a new group of users, click this button. The *Group Account* screen appears. Proceed to **Create or Edit a Group Account**, page 24.

Edit To change the description or access rights of a group, click **Edit**, and the *Group Account* screen appears. Proceed to **Create or Edit a Group Account**, page 24.

Delete To delete a group, click this button.

Create or Edit a User Account

User Account

User Account

User Name Create a name for the user.

Full Name Enter the actual name of the user.

Description Enter keywords to describe the user.

Password Enter the password that the user will use for login

Confirm Password Enter the password again to confirm.

Group Member Select the appropriate user group.

Account Disabled To temporarily disable an account, select this option.

Click **Save Settings** to apply your changes, or click **Cancel** to clear your changes. Click **Close** to exit the screen.

On the *Administration* screen, click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Create or Edit a Group Account

Group Account

Group Account

Group Name Create a name for the group.

Description Enter keywords to describe the group.

Access Select the appropriate level of access, **read and write** or **read only**.

Click **Save Settings** to apply your changes, or click **Cancel** to clear your changes. Click **Close** to exit the screen.

On the *Administration* screen, click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Access Restrictions > Internet Access

The *Internet Access* screen allows you to deny or allow specific kinds of Internet usage and traffic, such as Internet access, designated services, and websites during specific days and times.

Access Restrictions > Internet Access

Internet Access Policy

Access Policy Access can be managed by a policy. Use the settings on this screen to establish an access policy (after **Save Settings** is clicked). Selecting a policy from the drop-down menu will display that policy's settings. To delete a policy, select that policy's number and click **Delete This Policy**. To view all the policies, click **Summary**.

Summary

The policies are listed with the following information: No., Policy Name, Access, Days, Time, and status (Enabled). To enable a policy, select **Enabled**. To delete a policy, click **Delete**. Click **Save Settings** to save your changes, or click **Cancel Changes** to clear your changes. To return to the *Internet Access Policy* screen, click **Close**.

Status Policies are disabled by default. To enable a policy, select the policy number from the drop-down menu, and select **Enabled**.

To create a policy, follow steps 1-11. Repeat these steps to create additional policies, one at a time.

1. Select a number from the *Access Policy* drop-down menu.

2. Enter a Policy Name in the field provided.

3. To enable this policy, select **Enabled**.

4. Click **Edit List** to select which PCs will be affected by the policy. The *List of PCs* screen appears. You can select a PC by MAC address or IP address. You can also enter a range of IP addresses if you want this policy to affect a group of PCs. After making your changes, click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes. Then click **Close**.
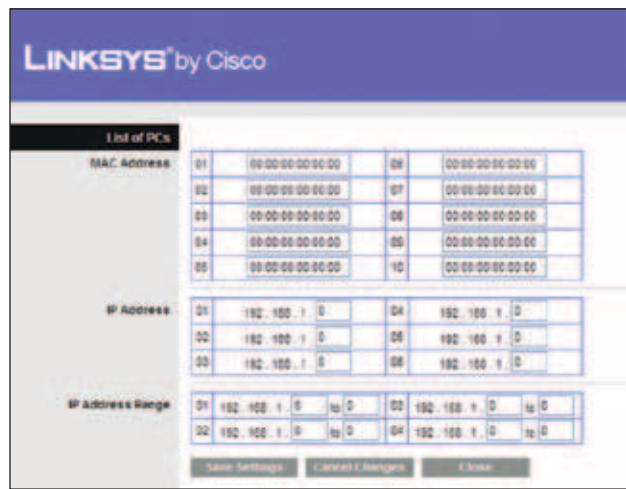
List of PCs

5. Select the appropriate option, **Deny** or **Allow**, depending on whether you want to block or allow Internet access for the PCs you listed on the *List of PCs* screen.

6. Decide which days and what times you want this policy to be enforced. Select the individual days during which the policy will be in effect, or select **Everyday**. Then enter a range of hours and minutes during which the policy will be in effect, or select **24 Hours**.

7. You can block websites with specific URL addresses. Enter each URL in a separate *Website Blocking by URL Address* field.

8. You can also block websites using specific keywords. Enter each keyword in a separate *Website Blocking by Keyword* field.

9. You can filter access to various services accessed over the Internet, such as FTP or telnet. (You can block up to three applications per policy.)

    From the Applications list, select the application you want to block. Then click the **>>** button to move it to the Blocked List. To remove an application from the Blocked List, select it and click the **<<** button.

10. If the application you want to block is not listed or you want to edit a service's settings, enter the application's name in the *Application Name* field. Enter its range in the **Port Range** fields. Select its protocol from the *Protocol* drop-down menu. Then click **Add**.

To modify a service, select it from the Application list. Change its name, port range, and/or protocol setting. Then click **Modify**.

To delete a service, select it from the Application list. Then click **Delete**.

11. Click **Save Settings** to save the policy's settings, or click **Cancel Changes** to clear the changes.

Applications and Gaming > Single Port Forwarding

The *Single Port Forwarding* screen allows you to customize port services for common applications.

When users send these types of requests to your network via the Internet, the Router will forward those requests to the appropriate servers (computers). Before using forwarding, you should assign static IP addresses to the designated servers (use the DHCP Reservation feature on the *Basic Setup* screen; refer to **DHCP Reservation**, **page 9**).

Applications and Gaming > Single Port Forwarding

Single Port Forwarding

Common applications are available for the first five entries.

Application Name Select the appropriate application.

To IP Address Enter the IP address of the server that should receive these requests.

Enabled For each application, select **Enabled** to activate port forwarding.

For additional applications, complete the following fields:

Application Name Enter the name you wish to give the application. Each name can have up to 12 characters.

External Port Enter the external port number used by the server or Internet application. Check with the Internet application documentation for more information.

Internal Port Enter the internal port number used by the server or Internet application. Check with the Internet application documentation for more information.

Protocol Select the protocol(s) used for this application, **TCP**, **UDP**, or **Both**.

To IP Address For each application, enter the IP address of the computer that should receive the requests. If you assigned a static IP address to the computer, then you can look up its static IP address; refer to **DHCP Reservation**, **page 9**.

Enabled For each application, select **Enabled** to enable port forwarding.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Applications and Gaming > Port Range Forwarding

The *Port Range Forwarding* screen allows you to set up public services on your network, such as web servers, ftp servers, e-mail servers, or other specialized Internet applications. (Specialized Internet applications are any applications that use Internet access to perform functions such as videoconferencing or online gaming. Some Internet applications may not require any forwarding.)

When users send these types of requests to your network via the Internet, the Router will forward those requests to the appropriate servers (computers). Before using forwarding, you should assign static IP addresses to the designated servers (use the DHCP Reservation feature on the *Basic Setup* screen; refer to **DHCP Reservation**, **page 9**).

If you need to forward all ports to one computer, click the **DMZ** tab.

Applications and Gaming > Port Range Forwarding

Port Range Forwarding

To forward a port, enter the information on each line for the criteria required.

Application Name In this field, enter the name you wish to give the application. Each name can be up to 12 characters.

Start~End Port Enter the number or range of port(s) used by the server or Internet applications. Check with the Internet application documentation for more information.

Protocol Select the protocol(s) used for this application, **TCP**, **UDP**, or **Both**.

To IP Address For each application, enter the IP address of the computer running the specific application. If you assigned a static IP address to the computer, then you can look up its static IP address; refer to **DHCP Reservation**, **page 9**.

Enabled Select **Enabled** to enable port forwarding.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Applications & Gaming > Port Range Triggering

The *Port Range Triggering* screen allows the Router to watch outgoing data for specific port numbers. The IP address of the computer that sends the matching data is remembered by the Router, so that when the requested data returns through the Router, the data is pulled back to the proper computer by way of IP address and port mapping rules.

Applications and Gaming > Port Range Triggering

Port Range Triggering

Application Name Enter the application name of the trigger.

Triggered Range For each application, enter the starting and ending port numbers of the triggered port number range. Check with the Internet application documentation for the port number(s) needed.

Forwarded Range For each application, enter the starting and ending port numbers of the forwarded

port number range. Check with the Internet application documentation for the port number(s) needed.

Enabled Select **Enabled** to enable port triggering.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Applications and Gaming > DMZ

The DMZ feature allows one network computer to be exposed to the Internet for use of a special-purpose service such as Internet gaming or videoconferencing. DMZ hosting forwards all the ports at the same time to one PC. The Port Range Forwarding feature is more secure because it only opens the ports you want to have opened, while DMZ hosting opens all the ports of one computer, exposing the computer to the Internet.

Applications and Gaming > DMZ

DMZ

Any computer whose port is being forwarded should have its DHCP client function disabled and have a new static IP address assigned to it because its IP address may change when using the DHCP function.

Enabled/Disabled To disable DMZ hosting, select **Disabled**. To expose one PC, select **Enabled**. Then configure the following settings:

Source IP Address If you want any IP address to be the source, select **Any IP Address**. If you want to specify an IP address or range of IP addresses as the designated source, select and complete the IP address range fields.

Destination If you want to specify the DMZ host by IP address, select **IP Address** and enter the IP address in the field provided. If you want to specify the DMZ host by MAC address, select **MAC Address** and enter the MAC address in the field provided.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Applications and Gaming > QoS

Quality of Service (QoS) ensures better service to high-priority types of network traffic, which may involve demanding, real-time applications, such as videoconferencing.

Applications and Gaming > QoS

QoS (Quality of Service)

Wireless

WMM Support Wi-Fi Multimedia (WMM) is a wireless Quality of Service feature that improves quality for audio, video, and voice applications by prioritizing wireless traffic. To use this feature, the wireless client devices in your network must support Wireless WMM. If you would like to disable this feature, select **Disabled**. Otherwise, keep the default, **Enabled**.

No Acknowledgement If you want to disable the Router's Acknowledgement feature, so the Router will not re-send data if an error occurs, select **Enabled**. Otherwise, keep the default, **Disabled**.

Internet Access Priority

In this section, you can set the bandwidth priority for a variety of applications and devices. There are four levels of priority; High, Medium, Normal, or Low. When you set priority, do not set all applications to High, because this will defeat the purpose of allocating the available bandwidth. If you want to select below normal bandwidth, select Low. Depending on the application, a few attempts may be needed to set the appropriate bandwidth priority.

Enabled/Disabled To use the QoS policies you set, select **Enabled**. Otherwise, select **Disabled**.

Category

Select one of the following categories: **Applications**, **Online Games**, **MAC Address**, **Ethernet Port**, or **Voice Device**. Proceed to the instructions for your selection.

Summary

This lists the QoS entries you have created for your applications and devices. Refer to **Summary**, **page 30** for more information.

Applications

Applications Select the appropriate application. If you select Add a New Application, follow the instructions in the *Add a New Application* section.

Priority Select the appropriate priority: **High**, **Medium (Recommended)**, **Normal**, or **Low**.

Click **Apply** to save your changes. Your new entry will appear in the Summary list.

Add a New Application
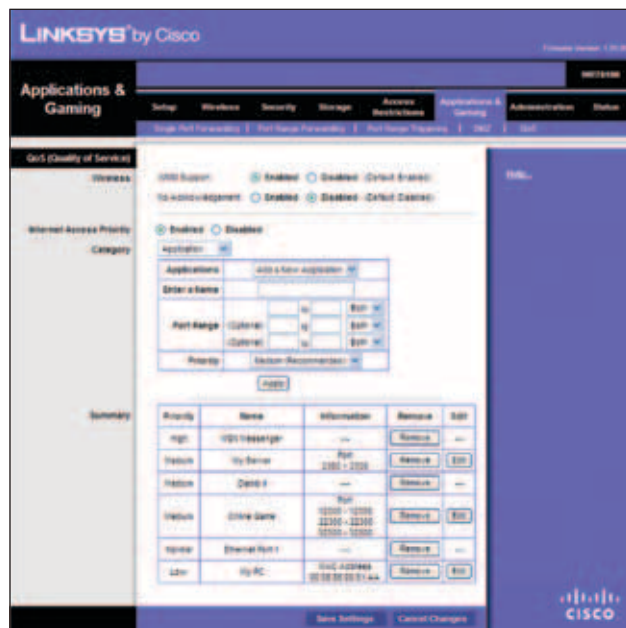
Add a New Application

Enter a Name Enter a name for this application.

Port Range Enter the port range that the application will be using. For example, if you want to allocate bandwidth for FTP, you can enter 21-21. If you need services for an application that uses from 1000 to 1250, you enter 1000-1250 as your settings. You can have up to three ranges to define for this bandwidth allocation. Port numbers can range from 1 to 65535. Check your application's documentation for details on the service ports used.

Select the protocol **TCP** or **UDP,** or select **Both**.

Priority Select the appropriate priority: **High**, **Medium** **(Recommended)**, **Normal**, or **Low**.

Click **Apply** to save your changes. Your new entry will appear in the Summary list.

Online Games

Online Games

Online Games

Games Select the appropriate game. If you select Add a New Game, follow the instructions in the *Add a New Game* section.

Priority Select the appropriate priority: **High**, **Medium** **(Recommended)**, **Normal**, or **Low**.

Click **Apply** to save your changes. Your new entry will appear in the Summary list.

Add a New Game

Enter a Name Enter any name to indicate the name of the entry.

Port Range Enter the port range that the game will be using. You can have up to three ranges to define for this bandwidth allocation. Port numbers can range from 1 to 65535. Check your application's documentation for details on the service ports used.

Select the protocol **TCP** or **UDP,** or select **Both**.

Priority Select the appropriate priority: **High**, **Medium** **(Recommended)**, **Normal**, or **Low**.

Click **Apply** to save your changes. Your new entry will appear in the Summary list.

MAC Address

MAC Address

The MAC address of the computer you are using is displayed.

Enter a Name Enter a name for your device.

MAC Address Enter the MAC address of your device.

Priority Select the appropriate priority: **High**, **Medium** **(Recommended)**, **Normal**, or **Low**.

Click **Apply** to save your changes. Your new entry will appear in the *Summary* list.

Ethernet Port

Ethernet Port

Ethernet Select the Ethernet port that you want to use.

Priority Select the appropriate priority: **High**, **Medium** **(Recommended)**, **Normal**, or **Low**.

Click **Apply** to save your changes. Your new entry will appear in the Summary list.

Voice Device

Voice Device

Enter a Name Enter a name for your voice device.

MAC Address Enter the MAC address of your voice device.

Priority Select the appropriate priority: **High** **(Recommended)**, **Medium**, **Normal**, or **Low**.

Click **Apply** to save your changes. Your new entry will appear in the Summary list.

Summary

This lists the QoS entries you have created for your applications and devices.

Priority This column displays the bandwidth priority of High, Medium, Normal, or Low.

Name This column displays the application, device, or port name.

Information This column displays the port range or MAC address entered for your entry. If a pre-configured application or game was selected, there will be no valid entry shown in this section.

Remove Click this button to remove an entry.

Edit Click this button to make changes.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Administration > Management

The *Management* screen allows the network's administrator to manage specific Router functions for access and security.

Administration > Management

Router Password

Router Access

To ensure the Router's security, you will be asked for your password when you access the Router's browser-based utility. The default is **admin**.

Router Password Enter a new password for the Router.

Re-enter to confirm Enter the password again to confirm.

Local Management Access

Access via HTTP (HyperText Transport Protocol) is the communications protocol used to connect to servers on the World Wide Web. HTTPS uses SSL (Secure Socket Layer) to encrypt data transmitted for higher security. Select the **HTTP** or **HTTPS**. The default is **HTTP**.

Access via Wireless If you are using the Router in a public domain where you are giving wireless access to your guests, you can disable wireless access to the Router's web-based utility. You will only be able to access the utility via a wired connection if you disable the setting. Keep the default, **Enabled**, to allow wireless access to the utility, or select **Disabled** to block wireless access to the utility.

Remote Management Access

Remote Management To permit remote access of the Router from the Internet (outside the local network), select **Enabled**. Otherwise, keep the default, **Disabled**.

Access via HTTP (HyperText Transport Protocol) is the communications protocol used to connect to servers

on the World Wide Web. HTTPS uses SSL (Secure Socket Layer) to encrypt data transmitted for higher security. Select **HTTP** or **HTTPS**. **HTTP** is the default.

Remote Upgrade If you want to be able to upgrade the Router from the Internet (outside the local network), select **Enabled**. (You must have the Remote Management feature enabled as well.) Otherwise, keep the default, **Disabled**.

Allowed Remote IP Address If you want to be able to access the Router from any external IP address, select **Any IP Address**. If you want to specify an external IP address or range of IP addresses, then select the second option and complete the fields provided.

Remote Management Port Enter the port number that will be open to outside access. You will need to enter the Router's password when accessing the Router this way, as usual.

> **NOTE:** When you are in a remote location and wish to manage the Router, enter **http://xxx.xxx.xxx.xxx:yyyy** or **https://xxx.xxx.xxx.xxx:yyyy**, depending on whether you use HTTP or HTTPS. Enter the Router's specific Internet IP address in place of xxx.xxx.xxx.xxx, and enter the Remote Management Port number in place of yyyy.

UPnP

Universal Plug and Play (UPnP) allows the appropriate Windows operating system to automatically configure the Router for various Internet applications, such as gaming and videoconferencing.

UPnP If you want to use UPnP, keep the default, **Enabled**. Otherwise, select **Disabled**.

Allow Users to Configure Keep the default, **Enabled**, if you want to be able to make manual changes to the Router while using the UPnP feature. Otherwise, select **Disabled**.

Allow Users to Disable Internet Access Select **Enabled**, if you want to be able to prohibit any and all Internet connections. Otherwise, keep the default, **Disabled**.

Backup and Restore

Backup Configurations To back up the Router's configuration settings, click this button and follow the on-screen instructions.

Restore Configurations To restore the Router's configuration settings, click this button and follow the on-screen instructions. (You must have previously backed up the Router's configuration settings.)

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Administration > Log

The Router can keep logs of all traffic for your Internet connection.

Administration > Log

Log

Log To disable the Log function, select **Disabled**. To monitor traffic between the network and the Internet, keep the default, **Enabled**. With logging enabled, you can choose to view temporary logs.

Logviewer IP Address If your computer uses Logviewer software, you can enter the fixed IP address of the computer running the software. The Router will now send updated logs to that computer.

When you wish to view the logs, click **View Log**.

- **Save the Log** Click this option to save this information to a file on your computer's hard drive.

- **Refresh** Click this option to update the log.

- **Clear** Click this option to clear all the information that is displayed.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Administration > Diagnostics

The diagnostic tests (Ping and Traceroute) allow you to check the connections of your network devices, including connection to the Internet.

Administration > Diagnostics

Diagnostics

Ping Test

Ping checks the status of a connection.

IP or URL Address Enter the address of the PC whose connection you wish to test.

Packet Size Enter the packet size you want to use. The default is **32** bytes.

Number to Ping Enter the number of times you wish to test the connection. The default is **5**.

Start Test To run the test, click this button. The *Ping* screen shows if the test is successful. Click **Close** to return to the *Diagnostics* screen. Click **Stop** to stop the test.
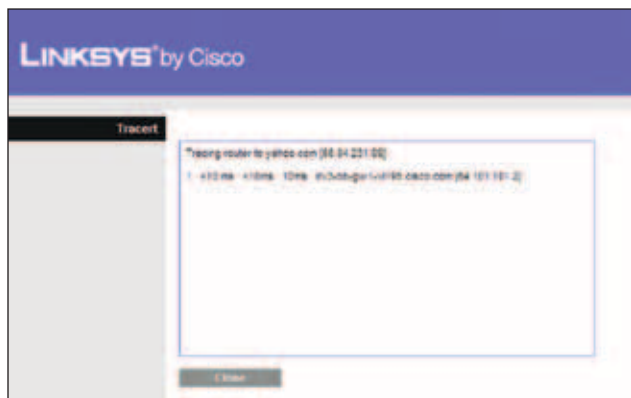

Ping

Traceroute Test

Traceroute checks the performance of a connection.

IP or URL Address Enter the address of the PC whose connection you wish to test.

Start Test To run the test, click this button. The *Traceroute* screen shows if the test is successful. Click **Close** to return to the *Diagnostics* screen. Click **Stop** to stop the test.

Traceroute

Administration > Factory Defaults

The *Factory Defaults* screen allows you to restore the Router's configuration to its factory default settings.

Factory Defaults

Restore Factory Defaults To reset the Router's settings to the default values, select **Restore Factory Defaults**. Any settings you have saved will be lost when the default settings are restored.

Administration > Factory Defaults

✓ **NOTE:** Do not restore the factory defaults unless you are having difficulties with the Router and have exhausted all other troubleshooting measures. Once the Router is reset, you will have to re-enter all of your configuration settings.

Administration > Firmware Upgrade

The *Firmware Upgrade* screen allows you to upgrade the Router's firmware. Do not upgrade the firmware unless you are experiencing problems with the Router or the new firmware has a feature you want to use.

Administration > Firmware Upgrade

✓ **NOTE:** The Router may lose the settings you have customized. Before you upgrade its firmware, write down all of your custom settings. After you upgrade its firmware, you will have to re-enter all of your configuration settings.

Firmware Upgrade

Before upgrading the firmware, download the Router's firmware upgrade file from the Linksys website, **www.linksysbycisco.com**.

Please Select a File to Upgrade Click **Browse** and select the firmware upgrade file.

Start Upgrade After you have selected the appropriate file, click this button, and follow the on-screen instructions.

Status > Router

The *Router* screen displays information about the Router and its current settings.

Status > Router

Router Information

Firmware Version The version number of the Router's current firmware is displayed.

Firmware Verification The unique identifier of the firmware is displayed.

Current Time The time set on the Router is displayed.

Internet MAC Address The Router's MAC Address, as seen by your ISP, is displayed.

Server Name The Server Name is the name used for the USB network storage, FTP, and media server functions of the Router. The default, **WRT610N**, is displayed.

Host Name The Host Name of the Router is displayed (if it was entered on the *Setup > Basic Setup* screen).

Domain Name The Domain Name of the Router is displayed (if it was entered on the *Setup > Basic Setup* screen).

Internet Connection

This section shows the current network information stored in the Router. The information varies depending on the Internet connection type selected on the *Setup > Basic Setup* screen.

For a DHCP connection, select **Release IP Address** or **Renew IP Address** as appropriate to release or renew a DHCP lease. For a PPPoE or similar connection, select **Connect** or **Disconnect** as appropriate to connect to or disconnect from the Internet.

Click **Refresh** to update the on-screen information.

Status > Local Network

The *Local Network* screen displays information about the local network.

Status > Local Network

Local Network

Local MAC Address The MAC address of the Router's local, wired interface is displayed.

Router IP Address The Router's IP address, as it appears on your local network, is displayed.

Subnet Mask The Subnet Mask of the Router is displayed.

DHCP Server

DHCP Server The status of the Router's DHCP server function is displayed.

Start IP Address For the range of IP addresses that can be used by devices on your local network, the starting IP address is displayed.

End IP Address For the range of IP addresses that can be used by devices on your local network, the ending IP address is displayed.

DHCP Clients Table Click this button to view a list of computers or other devices that are using the Router as a DHCP server.

Status > Wireless Network

The *Wireless Network* screen displays the status information of your 5 GHz and/or 2.4 GHz wireless network(s).

Status > Wireless Network

5GHz/2.4GHz Wireless Network

MAC Address The MAC address of the Router's local, wireless interface is displayed.

Mode The wireless mode used by the network is displayed.

Net work Name (SSID) The name of the wireless network, which is also called the SSID, is displayed.

Radio Band The Radio Band setting selected on the *Basic Wireless Settings* screen is displayed.

Wide Channel The Wide Channel setting selected on the *Basic Wireless Settings* screen is displayed.

Standard Channel The Standard Channel setting selected on the *Basic Wireless Settings* screen is displayed.

Security The wireless security method used by the Router is displayed.

SSID Broadcast The status of the SSID Broadcast feature is displayed.

Appendix A: Troubleshooting

Your computer cannot connect to the Internet.

Follow these instructions until your computer can connect to the Internet:

* Make sure that the Router is powered on. The Power LED should be green and not flashing.
* If the Power LED is flashing, then power off all of your network devices, including the modem, Router, and computers. Then power on each device in the following order:
    1. Cable or DSL modem
    2. Router
    3. Computer
* Check the cable connections. The computer should be connected to one of the ports numbered 1-4 on the Router, and the modem must be connected to the Internet port on the Router.

The modem does not have an Ethernet port.

The modem is a dial-up modem for traditional dial-up service. To use the Router, you need a cable/DSL modem and high-speed Internet connection.

You cannot use the DSL service to connect manually to the Internet.

After you have installed the Router, it will automatically connect to your Internet Service Provider (ISP), so you no longer need to connect manually.

The DSL telephone line does not fit into the Router's Internet port.

The Router does not replace your modem. You still need your DSL modem in order to use the Router. Connect the telephone line to the DSL modem, and then insert the setup CD into your computer. Click **Setup** and follow the on-screen instructions.

When you double-click the web browser, you are prompted for a username and password. If you want to get rid of the prompt, follow these instructions.

Launch the web browser and perform the following steps (these steps are specific to Internet Explorer but are similar for other browsers):

1. Select **Tools** > **Internet Options**.
2. Click the **Connections** tab.
3. Select **Never dial a connection**.
4. Click **OK**.

The Router does not have a coaxial port for the cable connection.

The Router does not replace your modem. You still need your cable modem in order to use the Router. Connect your cable connection to the cable modem, and then insert the setup CD into your computer. Click **Setup** and follow the on-screen instructions.

The computer cannot connect wirelessly to the network.

Make sure the wireless network name or SSID is the same on both the computer and the Router. If you have enabled wireless security, then make sure the same security method and key are used by both the computer and the Router.

You need to modify the settings on the Router.

Open the web browser (for example, Internet Explorer or Firefox), and enter the Router's IP address in the address field (the default IP address is **192.168.1.1**). When prompted, enter the password to the Router (the default is **admin**). Click the appropriate tab to change the settings.

The Router does not recognize your USB storage device.

Make sure the USB storage device uses the NTFS or FAT format. To check its format, follow these instructions:

1. Connect the USB storage device directly to your computer.
2. On your desktop, double-click **Computer** or **My Computer** icon.
3. Right-click the USB storage device, and click **Properties**.
4. The format is listed in the File system description. If the format is not NTFS or FAT, then back up the data on the USB storage device.

    After you have backed up the data on the USB storage drive, you can format it. Right-click the USB storage device, and click **Format**. Follow the on-screen instructions. For more information, refer to Windows Help.

If the Router still does not recognize the USB storage device, then remove the power adapter from the Router's Power port. Wait five seconds, and then re-connect the power adapter to the Router's Power port.

In Windows Vista, you do not see the USB storage device in the **Network** *screen.*

Make sure the Router and your computer use the same workgroup name. (The default workgroup name of the Router is **workgroup**. In Windows Vista, right-click the **Computer** icon and select **Properties**. Click **Advanced system settings**. Click the **Computer Name** tab. The workgroup name is displayed.) If they differ, then change the workgroup name of the Router. Follow these instructions:

1. Access the web-based utility of the Router. (Refer to **Chapter 3: Advanced Configuration**, **page 6**.)

2. Click the **Storage** tab.

3. Click the **Administration** tab.

4. In the *Workgroup Name* field, enter the workgroup name of your computer.

5. Click **Save Settings**.

In Windows XP, you do not see the Router in the **My Network Places** *screen.*

In the *Network Tasks* section, click **Show icons for networked UPnP devices**. If the Router does not appear, follow these instructions:

1. Go to **Start > Control Panel > Firewall**.

2. Click the **Exceptions** tab.

3. Select **UPnP Framework**.

4. Click **OK**.

In Windows XP, you do not see your USB storage device in the **View workgroup computers** *screen.*

Make sure the Router and your computer use the same workgroup name. (The default workgroup name of the Router is **workgroup**. In Windows XP, go to **Start > Control Panel > System**. Click the **Computer Name** tab. The workgroup name is displayed.) If they differ, then change the workgroup name of the Router. Follow these instructions:

1. Access the web-based utility of the Router. (Refer to **Chapter 3: Advanced Configuration**, **page 6**.)

2. Click the **Storage** tab.

3. Click the **Administration** tab.

4. In the *Workgroup Name* field, enter the workgroup name of your computer.

5. Click **Save Settings**.

WEB: If your questions are not addressed here, refer to the Linksys by Cisco website, **www.linksysbycisco.com**

Appendix B: How to Install and Access USB Storage

Overview

This appendix explains how to do the following:

- connect and access a USB storage device
- map a shortcut to a USB storage device
- create a shared folder on a USB storage device (advanced users)
- manage access to shared folders using group and user accounts (advanced users)

Install the USB Storage Device

1. Make sure your computer has a wired or wireless connection to the Router.
2. Connect an external USB hard disk drive or USB flash disk to the USB port of the Router.

Access the USB Storage Device

Follow the instructions for your Windows operating system, Vista or XP.

Windows Vista

1. On your desktop, double-click the **Computer** icon.

Computer Icon

> **NOTE:** If the Computer icon is not displayed, then go to **Start > All Programs > Accessories > Windows Explorer**.

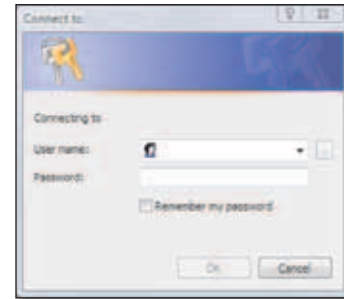2. In the *Address* field, enter **\\WRT610N** (the server name of the Router).

Enter Server Name of Router

> **NOTE:** Another option is to use the IP address of the Router. In the *Address* field, enter the local IP address of the Router: **\\xxx.xxx.xxx.xxx** The default is **192.168.1.1**. You can change this IP address on the *Setup > Basic Setup* screen; refer to **Setup > Basic Setup**, **page 6**.

3. On the login screen, enter your account user name and password. (For the admin account, **admin** is both the default user name and password.)
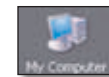
Enter Account User Name and Password

User accounts are set up on the *Storage > Administration* screen; for more information, refer to , **page 41**.

Windows XP

1. On your desktop, double-click the **My Computer** icon.

My Computer Icon

> **NOTE:** If the My Computer icon is not displayed, then go to **Start > All Programs > Accessories > Windows Explorer**.

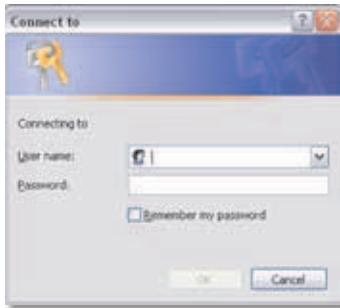2. In the *Address* field, enter **\\WRT610N** (the server name of the Router).

Enter Server Name of Router

> **NOTE:** Another option is to use the IP address of the Router. In the *Address* field, enter the local IP address of the Router: **\\xxx.xxx.xxx.xxx** The default is **192.168.1.1**. You can change this IP address on the *Setup > Basic Setup* screen; refer to **Setup > Basic Setup**, **page 6**.

3. Enter your account user name and password. (For the admin account, **admin** is both the default user name and password.)

Enter Account User Name and Password

User accounts are set up on the *Storage > Administration* screen; for more information, refer to , <u>page 41</u>.

Create a Shortcut to a Shared Folder

You can map any folder of the USB storage device as a separate drive. Follow the instructions for your Windows operating system, Vista or XP.

Windows Vista

Map a Drive

1. On your desktop, double-click the **Network** icon.

Network Icon

 NOTE: If the My Computer icon is not displayed, then go to **Start > All Programs > Accessories > Windows Explorer**.

2. In the *Address* field, enter **\\WRT610N (**the server name of the Router).


Enter Server Name of Router

 NOTE: Another option is to use the IP address of the Router. In the *Address* field, enter the local IP address of the Router: **\\xxx.xxx.xxx.xxx** The default is **192.168.1.1**. You can change this IP address on the *Setup > Basic Setup* screen; refer to **Setup > Basic Setup**, **page 6**.

3. Right-click the folder you want to share, and click **Map Network Drive**. (The default shared folder is named **Public**.)
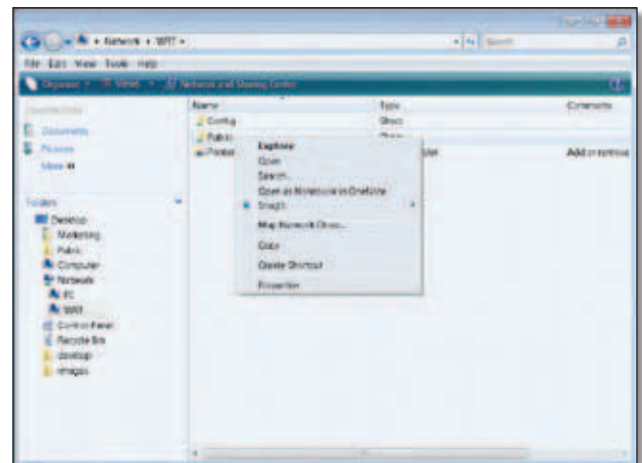
Map Network Drive

4. From the *Drive* drop-down menu, select an available drive letter.
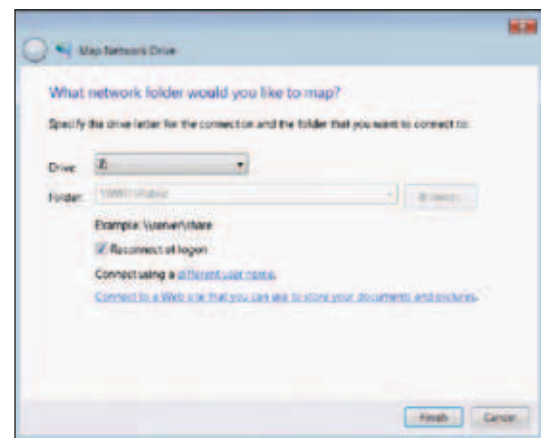
Select Drive Letter

5. Click **Finish**.

Access Mapped Drive

1. On your desktop, double-click the **Computer** icon.

Computer Icon

> **NOTE:** If the Computer icon is not displayed, then go to **Start > All Programs > Accessories > Windows Explorer**.

2. Double-click the mapped drive to access it.

Double-Click Mapped Drive

Windows XP

Map a Drive

1. On your desktop, double-click the **My Computer** icon.

My Computer Icon

> **NOTE:** If the My Computer icon is not displayed, then go to **Start > All Programs > Accessories > Windows Explorer**.

2. In the *Address* field, enter **\\WRT610N** (the server name of the Router).
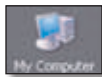

Enter Server Name of Router

> **NOTE:** Another option is to use the IP address of the Router. In the *Address* field, enter the local IP address of the Router: **\\xxx.xxx.xxx.xxx** The default is **192.168.1.1**. You can change this IP address on the *Setup > Basic Setup* screen; refer to <u>Setup > Basic Setup</u>, <u>page 6</u>.

3. A login screen may appear. If prompted, enter your account user name and password. (For the admin account, **admin** is both the default user name and password.)
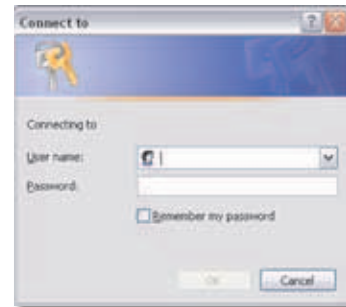
Enter Account User Name and Password

User accounts are set up on the *Storage > Administration* screen; for more information, refer to , <u>page 41</u>.

4. Right-click the folder you want to share, and click **Map Network Drive**. (The default shared folder is named **Public**.)
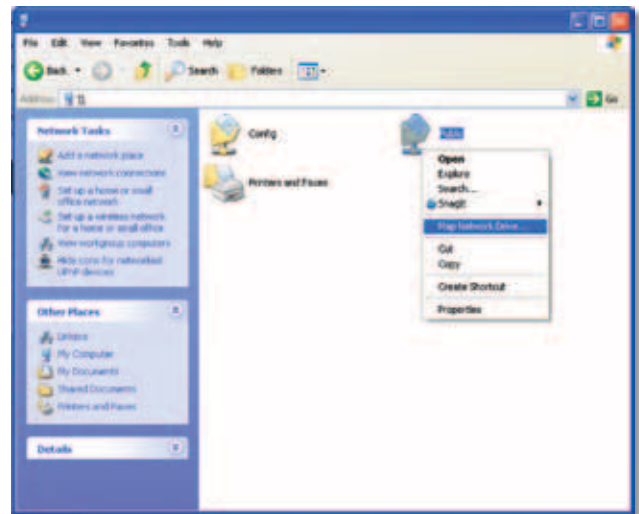
Map Network Drive

5.	From the *Drive* drop-down menu, select an available drive letter.

Select Drive Letter

6.	Click **Finish**.

Access Mapped Drive

1.	On your desktop, double-click the **My Computer** icon.
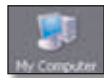
My Computer Icon

NOTE: If the My Computer icon is not displayed, then go to **Start > All Programs > Accessories > Windows Explorer**.

2.	In the *Network Drives* section, double-click the mapped drive to access it.
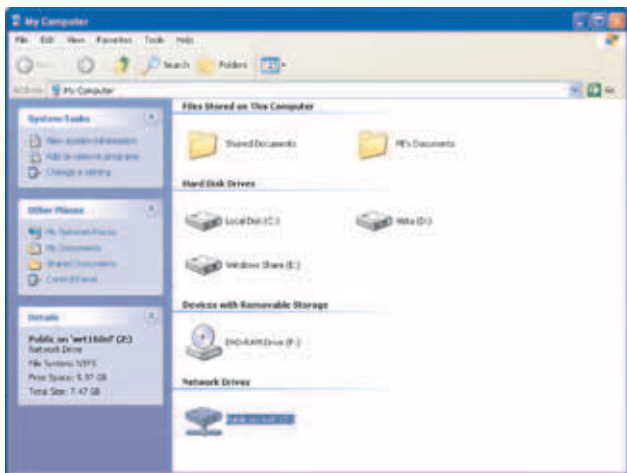
Double-Click Mapped Drive

Advanced Configuration (Advanced Users Only)

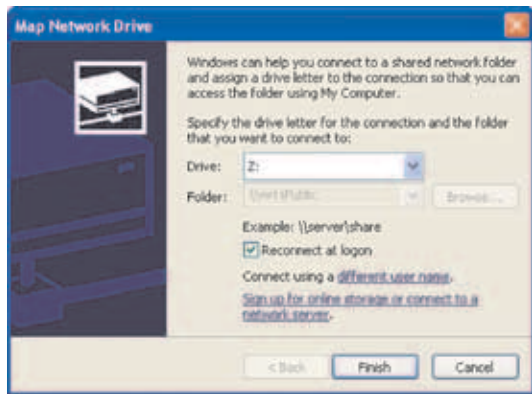To manage access to the USB storage device, you can create shared folders, user groups, and user accounts.

Access the Browser-Based Utility

To access the browser-based utility, launch the web browser on your computer, and enter the Router's default IP address, **192.168.1.1**, in the *Address* field. Then press **Enter**.

A login screen will appear. (Non-Windows XP users will see a similar screen.) Leave the *User name* field blank. The first time you open the Web-based utility, use the default password **admin**. (You can set a new password on the *Administration > Management* screen. Refer to **Administration > Management**, **page 30**.) Click **OK** to continue.
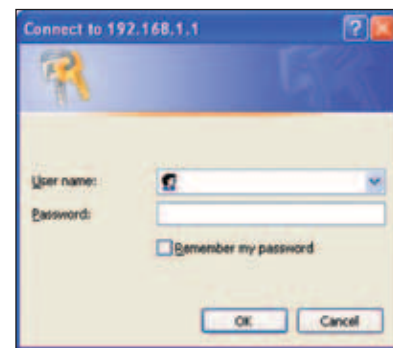
Login Screen

Create a Shared Folder

1.	Click the **Storage** tab.
2.	Click the **Disk** tab.

Storage > Disk

3. To create a shared folder, click **Create Share**.

Shared Folder

4. In the *Display Name* field, create a display name for the shared folder.

5. In the *New Folder* field, create a name for the physical location of the shared folder. Then click **Create**.

6. If the shared folder should include the entire partition, select **Share entire Partition** and proceed to step 8.

   If you do not want to share the entire partition, then specify the folder you do want to share.

7. Select the appropriate folder. To display sub-folders, click **Enter into Folder**. To return to the previous folder, click **Return to Upper Folder**.

8. To allow a group access to the shared folder, select it from the Available Groups column, and then click the **>>** button.

   ✔ **NOTE:** Specify which user groups have read-and-write or read-only access to the shared folders.

9. To block a group from accessing the shared folder, select it from the Groups with Access column, and then click the **<<** button.

10. Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes. Click **Close** to exit the screen and return to the *Disk* screen.

Create a User Group Account

1. Click the **Storage** tab.

2. Click the **Administration** tab.

Storage > Administration

3. In the *Group Management* section, click **Create New Group**.

Group Account

4. In the *Group Name* field, create a name for the group.

5. In the *Description* field, enter keywords to describe the group.

6. From the *Access* drop-down menu, select the appropriate level of access, **read and write** or **read only**.

7. Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes. Click **Close** to exit the screen and return to the *Administration* screen.

Create a User Account

1. Click the **Storage** tab.

2. Click the **Administration** tab.

Storage > Administration

3. In the *User Management* section, click **Create New User**.

User Account

4. In the *User Name* field, create a name for the user.

5. In the *Full Name* field, enter the actual name of the user.

6. In the *Description* field, enter keywords to describe the user.

7. In the *Password* and *Confirm Password* fields, enter the password that the user will use for login.

8. From the *Group Member* drop-down menu, select the appropriate user group.

NOTE: To temporarily disable an account, select **Account Disabled**.

9. Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes. Click **Close** to exit the screen and return to the *Administration* screen.

Appendix C: Specifications

Model	WRT610N
Standards	Draft 802.11n, 802.11a, 802.11g, 802.11b, 802.3, 802.3u, 802.3ab
Ports	Power, Ethernet 1-4, Internet, USB
Button	Power, Reset, Wi-Fi Protected Setup
LEDs	Power, USB, Internet, Wireless, Wi-Fi Protected Setup, Ethernet (1-4)
No. of Antennas	6 Total, 3 Internal Antennas per Each 2.4 GHz & 5 GHz Radio Band
Detachable (y/n)	No
Modulations	802.11b: CCK, QPSK, BPSK 802.11g: OFDM 802.11a: OFDM Wireless-N: BPSK, QPSK, 16-QAM, 64-QAM

RF Pwr (EIRP) in dBm
2.4GHz Output Power Per TX Chain

802.11b:	Max. 20.5 dBm @ All Rates	
802.11g:	Max. 20.5 dBm @ Low Rates	
	Max. 19.5 dBm @ High Rates	
Wireless-N 20 MHz:	Max. 20.5 dBm @ Low Rates	
	Max. 18.5 dBm @ High Rates	
Wireless-N 40 MHz:	Max. 17.0 dBm @ All Rates	

5 GHz Output Power Per TX Chain
UNII-1 (5150-5250 GHz)

802.11a:	Max. 14.0 dBm @ All Rates
Wireless-N 20 MHz:	Max. 11.5 dBm @ All Rates
Wireless-N 40 MHz:	Max. 12.0 dBm @ All Rates

UNII-3 (5725-5850 GHz)

802.11a:	Max. 17.5 dBm @ High Rates
802.11a:	Max. 20.0 dBm @ Low Rates
Wireless-N 20 MHz:	Max. 17.5 dBm @ High Rates
Wireless-N 20 MHz:	Max. 20.0 dBm @ Low Rates
Wireless-N 40 MHz:	Max. 17.5 dBm @ High Rates
Wireless-N 40 MHz:	Max. 21.0 dBm @ Low Rates

Receive Sensitivity	2.4 GHz 11 Mbps: -87 dBm @ Typical 54 Mbps: -77 dBm @ Typical MCS15 (20 MHz): -71 dBm @ Typical MCS15 (40 MHz): -68 dBm @ Typical
	5 GHz 54 Mbps: -74 dBm @ Typical MCS15 (20 MHz): -68 dBm @ Typical MCS15 (40 MHz): -65 dBm @ Typical
Antenna Gain in dBi	2.4 GHz: PIFA 1 & PIFA 2 & PIFA 3 <= 4 dBi (Typical)
	5 GHz: PIFA 1 & PIFA 2 & PIFA 3 <= 3.5 dBi (Typical)
UPnP	Supported
Security Features	WEP, WPA, WPA2
WEP Key Bits	Up to 128-Bit Encryption

Environmental

Dimensions	8.86" x 1.38" x 7.09" (225 x 35 x 180 mm)
Unit Weight	15.94 oz (452 g)
Power	12V, 2A
Certifications	FCC, IC, CE, Wi-Fi a/b/g/draft-n, Recycle Logo, Energy Star EPS
Operating Temp.	0 to 40°C (32 to 104°F)
Storage Temp.	-20 to 60°C (-4 to 140°F)
Operating Humidity	10 to 80%, Relative Humidity and Noncondensing
Storage Humidity	5 to 90% Noncondensing

Specifications are subject to change without notice.

Appendix D: Warranty Information

Limited Warranty

FOR CONSUMERS WHO ARE COVERED BY CONSUMER PROTECTION LAWS OR REGULATIONS IN THEIR COUNTRY OF PURCHASE OR, IF DIFFERENT, THEIR COUNTRY OF RESIDENCE, THE BENEFITS CONFERRED BY THIS WARRANTY ARE IN ADDITION TO ALL RIGHTS AND REMEDIES CONVEYED BY SUCH CONSUMER PROTECTION LAWS AND REGULATIONS. THIS WARRANTY DOES NOT EXCLUDE, LIMIT OR SUSPEND ANY RIGHTS OF CONSUMERS ARISING OUT OF NONCONFORMITY WITH A SALES CONTRACT. SOME COUNTRIES, STATES AND PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES OR ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY OR CONDITION MAY LAST, SO THE LIMITATIONS OR EXCLUSIONS DESCRIBED BELOW MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY BY COUNTRY, STATE OR PROVINCE. THIS LIMITED WARRANTY IS GOVERNED BY AND CONSTRUED UNDER THE LAWS OF THE COUNTRY IN WHICH THE PRODUCT PURCHASE TOOK PLACE.

Linksys warrants the hardware in this Linksys product against defects in materials and workmanship under normal use for the Warranty Period, which begins on the date of purchase by the original end-user purchaser and lasts for the period specified below:

• One (1) year for new product

• Ninety (90) days for refurbished product

Your exclusive remedy and Linksys' entire liability under this limited warranty will be for Linksys, at its option, to (a) repair the product with new or refurbished parts, (b) replace the product with a reasonably available equivalent new or refurbished Linksys product, or (c) refund the purchase price of the product less any rebates. Any repaired or replacement products will be warranted for the remainder of the original Warranty Period or thirty (30) days, whichever is longer. All products and parts that are replaced become the property of Linksys.

Linksys additionally warrants that any media on which the software may be provided will be free from defects in materials and workmanship under normal use for a period of ninety (90) days from the date of original purchase. Your exclusive remedy and Linksys' entire liability under this limited warranty will be for Linksys, at its option, to (a) replace the software media, or (b) refund the purchase price of the software media.

Exclusions and Limitations

This limited warranty does not apply if: (a) the product assembly seal has been removed or damaged, (b) the product has been altered or modified, except by Linksys, (c) the product damage was caused by use with non-Linksys products, (d) the product has not been installed, operated, repaired, or maintained in accordance with instructions supplied by Linksys, (e) the product has been subjected to abnormal physical or electrical stress, misuse, negligence, or accident, (f) the serial number on the Product has been altered, defaced, or removed, or (g) the product is supplied or licensed for beta, evaluation, testing or demonstration purposes for which Linksys does not charge a purchase price or license fee.

EXCEPT FOR THE LIMITED WARRANTY ON MEDIA SET FORTH ABOVE AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, ALL SOFTWARE AND SERVICES PROVIDED BY LINKSYS WITH THE PRODUCT, WHETHER FACTORY LOADED ON THE PRODUCT OR CONTAINED ON MEDIA ACCOMPANYING THE PRODUCT, IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND. Without limiting the foregoing, Linksys does not warrant that the operation of the product, software or services will be uninterrupted or error free. Also, due to the continual development of new techniques for intruding upon and attacking networks, Linksys does not warrant that the product, software or services, or any equipment, system or network on which the product, software or services are used will be free of vulnerability to intrusion or attack. The product may include or be bundled with third party software or service offerings. This limited warranty shall not apply to such third party software or service offerings. This limited warranty does not guarantee any continued availability of a third party's service for which this product's use or operation may require.

TO THE EXTENT NOT PROHIBITED BY APPLICABLE LAW, ALL IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY OR FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO THE DURATION OF THE WARRANTY PERIOD. ALL OTHER EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF NON-INFRINGEMENT, ARE DISCLAIMED.

TO THE EXTENT NOT PROHIBITED BY APPLICABLE LAW, IN NO EVENT WILL LINKSYS BE LIABLE FOR ANY LOST DATA, REVENUE OR PROFIT, LOSS OF THE ABILITY TO USE ANY THIRD PARTY PRODUCTS, SOFTWARE OR SERVICES, OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, REGARDLESS OF THE THEORY OF LIABILITY (INCLUDING NEGLIGENCE), ARISING OUT OF OR RELATED TO THE USE OF OR INABILITY TO USE THE PRODUCT, SOFTWARE OR ANY SERVICES PROVIDED IN RESPECT OF SUCH PRODUCT, SOFTWARE OR SERVICE, EVEN IF LINKSYS HAS BEEN ADVISED OF THE POSSIBILITY

OF SUCH DAMAGES. TO THE EXTENT NOT PROHIBITED BY APPLICABLE LAW, IN NO EVENT WILL LINKSYS' LIABILITY EXCEED THE AMOUNT PAID BY YOU FOR THE PRODUCT. The foregoing limitations will apply even if any warranty or remedy provided under this limited warranty fails of its essential purpose.

No Linksys employee, agent or reseller is authorized to make any verbal or written modification, extension or addition to this warranty, and Linksys expressly disclaims any such change to this warranty. If any portion of this limited warranty is found to be void or unenforceable, its remaining provisions shall remain in full force and effect.

Obtaining Warranty Service

If you have a question about your product or experience a problem with it, please go to **www.linksysbycisco.com/support** where you will find a variety of online support tools and information to assist you with your product. If the product proves defective during the Warranty Period, contact Linksys Technical Support (or, if you purchased your product from a service provider, contact the service provider) for instructions on how to obtain warranty service. The telephone number for Linksys Technical Support in your area can be found by clicking the "Contact Us" link on the home page of **www.linksysbycisco.com**. Have your product serial number and proof of purchase on hand when calling. A DATED PROOF OF ORIGINAL PURCHASE IS REQUIRED TO PROCESS WARRANTY CLAIMS. If you are requested to return your product, you will be given a Return Materials Authorization (RMA) number. You are responsible for properly packaging and shipping your product at your cost and risk. You must include the RMA number and a copy of your dated proof of original purchase when returning your product. Products received without a RMA number and dated proof of original purchase will be rejected. Do not include any other items with the product you are returning. Defective product covered by this limited warranty will be repaired or replaced and returned to you without charge. Customers outside of the United States of America and Canada are responsible for all shipping and handling charges, custom duties, VAT and other associated taxes and charges. Repairs or replacements not covered under this limited warranty will be subject to charge at Linksys' then-current rates.

Technical Support

This limited warranty is neither a service nor a support contract. Information about Linksys' current technical support offerings and policies (including any fees for support services) can be found at **www.linksysbycisco.com/support**.

Please direct all inquiries to: Linksys, P.O. Box 18558, Irvine, CA 92623.

Appendix E: Regulatory Information

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This product has been tested and complies with the specifications for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used according to the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which is found by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

•	 Reorient or relocate the receiving antenna

•	 Increase the separation between the equipment or devices

•	 Connect the equipment to an outlet other than the receiver's

•	 Consult a dealer or an experienced radio/TV technician for assistance

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IEEE 802.11b or 802.11g operation of this product in the USA is firmware-limited to channels 1 through 11.

The device for the band 5150-5250 MHz is only for indoor usage to reduce the potential for harmful interference to co-channel mobile satellite systems.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Safety Notices

WARNING: Do not use this product near water, for example, in a wet basement or near a swimming pool.

WARNING: Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.

WARNING: This product contains lead, known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling.

Caution: To reduce the risk of fire, use only No.26 AWG or larger telecommunication line cord.

Industry Canada Statement

This Class B digital apparatus complies with Canadian ICES-003 and RSS210.

Operation is subject to the following two conditions:

1.	 This device may not cause interference and

2.	 This device must accept any interference, including interference that may cause undesired operation of the device.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the EIRP is not more than required for successful communication.

Industry Canada Radiation Exposure Statement

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Restrictions in the 5 GHz Band

1.	 The device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.

2.	 This device has been designed to operate with an antenna having a maximum gain of 4 dBi and 3.5 dBi at 2.4 GHz and 5 GHz respectively. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms.

Because high power radars are allocated as primary users (meaning they have priority) in 5250-5350 MHz and 5650-5850 MHz, these radars could cause interference and/or damage to licensed exempt LAN devices.

Additional requirements for the band 5600-5650 MHz: Until further notice, devices subject to this Section shall not be capable of transmitting in the band 5600-5650 MHz, so that Environment Canada weather radars operating in this band are protected.

Avis d'Industrie Canada

Cet appareil numérique de la classe B est conforme aux normes NMB-003 et RSS210 du Canada.

L'utilisation de ce dispositif est autorisée seulement aux conditions suivantes :

1. il ne doit pas produire de brouillage et
2. il doit accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

Avis d'Industrie Canada concernant l'exposition aux radiofréquences

Ce matériel est conforme aux limites établies par IC en matière d'exposition aux radiofréquences dans un environnement non contrôlé. Ce matériel doit être installé et utilisé à une distance d'au moins 20 cm entre l'antenne et le corps de l'utilisateur.

L'émetteur ne doit pas être placé près d'une autre antenne ou d'un autre émetteur, ou fonctionner avec une autre antenne ou un autre émetteur.

Restrictions dans la bande 5 GHz

1. L'appareil pour la bande de 5 150 à 5 250 MHz est conçu pour usage à l'intérieur seulement afin de réduire le potentiel d'interférences pour les systèmes mobiles par satellite qui utilisent le même canal.
2. Cet appareil est conçu pour fonctionner avec une antenne ayant un gain maximal de 4 dBi à 2,4 GHz et de 3,5 dBi à 5 GHz. Les antennes ayant un gain plus élevé sont strictement interdites par Industrie Canada. L'impédance d'antenne requise est de 50 ohms.

Du fait que les radars haute puissance ont la priorité dans les bandes 5 250-5 350 MHz et 5 650-5 850 MHz, ils pourraient causer des interférences ou endommager les périphériques réseau sans fil.

Autres restrictions pour la bande 5 600-5 650 MHz : sauf avis contraire, les périphériques concernés par cette section ne doivent pas être capables de transmettre dans la bande 5 600-5 650 MHz afin de protéger les radars d'Environnement Canada qui l'utilisent.

Wireless Disclaimer

The maximum performance for wireless is derived from IEEE Standard 802.11 specifications. Actual performance can vary, including lower wireless network capacity, data throughput rate, range and coverage. Performance depends on many factors, conditions and variables, including distance from the access point, volume of network traffic, building materials and construction, operating system used, mix of wireless products used, interference and other adverse conditions.

Avis de non-responsabilité concernant les appareils sans fil

Les performances maximales pour les réseaux sans fil sont tirées des spécifications de la norme IEEE 802.11. Les performances réelles peuvent varier, notamment en fonction de la capacité du réseau sans fil, du débit de la transmission de données, de la portée et de la couverture. Les performances dépendent de facteurs, conditions et variables multiples, en particulier de la distance par rapport au point d'accès, du volume du trafic réseau, des matériaux utilisés dans le bâtiment et du type de construction, du système d'exploitation et de la combinaison de produits sans fil utilisés, des interférences et de toute autre condition défavorable.

User Information for Consumer Products Covered by EU Directive 2002/96/EC on Waste Electric and Electronic Equipment (WEEE)

This document contains important information for users with regards to the proper disposal and recycling of Linksys products. Consumers are required to comply with this notice for all electronic products bearing the following symbol:

English - Environmental Information for Customers in the European Union

European Directive 2002/96/EC requires that the equipment bearing this symbol ⚒ on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your old equipment, please contact your local authorities, waste disposal service, or the shop where you purchased the product.

Български (Bulgarian) - Информация относно опазването на околната среда за потребители в Европейския съюз

Европейска директива 2002/96/EC изисква уредите, носещи този символ ⚒ върху изделието и/или опаковката му, да не се изхвърля т с несортирани битови отпадъци. Символът обозначава, че изделието трябва да се изхвърля отделно от сметосъбирането на обикновените битови отпадъци. Ваша е отговорността този и другите електрически и електронни уреди да се изхвърлят в предварително определени от държавните или общински органи специализирани пунктове за събиране. Правилното изхвърляне и рециклиране ще спомогнат да се предотвратят евентуални вредни за околната среда и здравето на населението последствия. За по-подробна информация относно изхвърлянето на вашите стари уреди се обърнете към местните власти, службите за сметосъбиране или магазина, от който сте закупили уреда.

Čeština (Czech) - Informace o ochraně životního prostředí pro zákazníky v zemích Evropské unie

Evropská směrnice 2002/96/ES zakazuje, aby zařízení označené tímto symbolem ⚒ na produktu anebo na obalu bylo likvidováno s netříděným komunálním odpadem. Tento symbol udává, že daný produkt musí být likvidován odděleně od běžného komunálního odpadu. Odpovídáte za likvidaci tohoto produktu a dalších elektrických a elektronických zařízení prostřednictvím určených sběrných míst stanovených vládou nebo místními úřady. Správná likvidace a recyklace pomáhá předcházet potenciálním negativním dopadům na životní prostředí a lidské zdraví. Podrobnější informace o likvidaci starého vybavení si laskavě vyžádejte od místních úřadů, podniku zabývajícího se likvidací komunálních odpadů nebo obchodu, kde jste produkt zakoupili.

Dansk (Danish) - Miljøinformation for kunder i EU

EU-direktiv 2002/96/EF kræver, at udstyr der bærer dette symbol ⚒ på produktet og/eller emballagen ikke må bortskaffes som usorteret kommunalt affald. Symbolet betyder, at dette produkt skal bortskaffes adskilt fra det almindelige husholdningsaffald. Det er dit ansvar at bortskaffe dette og andet elektrisk og elektronisk udstyr via bestemte indsamlingssteder udpeget af staten eller de lokale myndigheder. Korrekt bortskaffelse og genvinding vil hjælpe med til at undgå mulige skader for miljøet og menneskers sundhed. Kontakt venligst de lokale myndigheder, renovationstjenesten eller den butik, hvor du har købt produktet, angående mere detaljeret information om bortskaffelse af dit gamle udstyr.

Deutsch (German) - Umweltinformation für Kunden innerhalb der Europäischen Union

Die Europäische Richtlinie 2002/96/EC verlangt, dass technische Ausrüstung, die direkt am Gerät und/oder an der Verpackung mit diesem Symbol versehen ist ⚒, nicht zusammen mit unsortiertem Gemeindeabfall entsorgt werden darf. Das Symbol weist darauf hin, dass das Produkt von regulärem Haushaltmüll getrennt entsorgt werden sollte. Es liegt in Ihrer Verantwortung, dieses Gerät und andere elektrische und elektronische Geräte über die dafür zuständigen und von der Regierung oder örtlichen Behörden dazu bestimmten Sammelstellen zu entsorgen. Ordnungsgemäßes Entsorgen und Recyceln trägt dazu bei, potentielle negative Folgen für Umwelt und die menschliche Gesundheit zu vermeiden. Wenn Sie weitere Informationen zur Entsorgung Ihrer Altgeräte benötigen, wenden Sie sich bitte an die örtlichen Behörden oder städtischen Entsorgungsdienste oder an den Händler, bei dem Sie das Produkt erworben haben.

Eesti (Estonian) - Keskkonnaalane informatsioon Euroopa Liidus asuvatele klientidele

Euroopa Liidu direktiivi 2002/96/EÜ nõuete kohaselt on seadmeid, millel on tootel või pakendil käesolev sümbol ⌧, keelatud kõrvaldada koos sorteerimata olmejäätmetega. See sümbol näitab, et toode tuleks kõrvaldada eraldi tavalistest olmejäätmevoogudest. Olete kohustatud kõrvaldama käesoleva ja ka muud elektri- ja elektroonikaseadmed riigi või kohalike ametiasutuste poolt ette nähtud kogumispunktide kaudu. Seadmete korrektne kõrvaldamine ja ringlussevõtt aitab vältida võimalikke negatiivseid tagajärgi keskkonnale ning inimeste tervisele. Vanade seadmete kõrvaldamise kohta täpsema informatsiooni saamiseks võtke palun ühendust kohalike ametiasutustega, jäätmekäitlusfirmaga või kauplusega, kust te toote ostsite.

Español (Spanish) - Información medioambiental para clientes de la Unión Europea

La Directiva 2002/96/CE de la UE exige que los equipos que lleven este símbolo ⌧ en el propio aparato y/o en su embalaje no deben eliminarse junto con otros residuos urbanos no seleccionados. El símbolo indica que el producto en cuestión debe separarse de los residuos domésticos convencionales con vistas a su eliminación. Es responsabilidad suya desechar este y cualesquiera otros aparatos eléctricos y electrónicos a través de los puntos de recogida que ponen a su disposición el gobierno y las autoridades locales. Al desechar y reciclar correctamente estos aparatos estará contribuyendo a evitar posibles consecuencias negativas para el medio ambiente y la salud de las personas. Si desea obtener información más detallada sobre la eliminación segura de su aparato usado, consulte a las autoridades locales, al servicio de recogida y eliminación de residuos de su zona o pregunte en la tienda donde adquirió el producto.

Ελληνικά (Greek) - Στοιχεία περιβαλλοντικής προστασίας για πελάτες εντός της Ευρωπαϊκής Ένωσης

Σύμφωνα με την Κοινοτική Οδηγία 2002/96/EC, ο εξοπλισμός που φέρει αυτό το σύμβολο ⌧ στο προϊόν ή/και τη συσκευασία του δεν πρέπει να απορρίπτεται μαζί με τα μη διαχωρισμένα αστικά απορρίμματα. Το σύμβολο υποδεικνύει ότι αυτό το προϊόν θα πρέπει να απορρίπτεται ξεχωριστά από τα συνήθη οικιακά απορρίμματα. Είστε υπεύθυνος για την απόρριψη του παρόντος και άλλου ηλεκτρικού και ηλεκτρονικού εξοπλισμού μέσω των καθορισμένων εγκαταστάσεων συγκέντρωσης απορριμμάτων, οι οποίες ορίζονται από το κράτος ή τις αρμόδιες τοπικές αρχές. Η σωστή απόρριψη και ανακύκλωση συμβάλλει στην πρόληψη ενδεχόμενων αρνητικών επιπτώσεων στο περιβάλλον και την υγεία. Για περισσότερες πληροφορίες σχετικά με την απόρριψη του παλαιού σας εξοπλισμού, επικοινωνήστε με τις τοπικές αρχές, τις υπηρεσίες αποκομιδής απορριμμάτων ή το κατάστημα από το οποίο αγοράσατε το προϊόν.

Français (French) - Informations environnementales pour les clients de l'Union européenne

La directive européenne 2002/96/CE exige que l'équipement sur lequel est apposé ce symbole ⌧ sur le produit et/ou son emballage ne soit pas jeté avec les autres ordures ménagères. Ce symbole indique que le produit doit être éliminé dans un circuit distinct de celui pour les déchets des ménages. Il est de votre responsabilité de jeter ce matériel ainsi que tout autre matériel électrique ou électronique par les moyens de collecte indiqués par le gouvernement et les pouvoirs publics des collectivités territoriales. L'élimination et le recyclage en bonne et due forme ont pour but de lutter contre l'impact néfaste potentiel de ce type de produits sur l'environnement et la santé publique. Pour plus d'informations sur le mode d'élimination de votre ancien équipement, veuillez prendre contact avec les pouvoirs publics locaux, le service de traitement des déchets, ou l'endroit où vous avez acheté le produit.

Italiano (Italian) - Informazioni relative all'ambiente per i clienti residenti nell'Unione Europea

La direttiva europea 2002/96/EC richiede che le apparecchiature contrassegnate con questo simbolo ⌧ sul prodotto e/o sull'imballaggio non siano smaltite insieme ai rifiuti urbani non differenziati. Il simbolo indica che questo prodotto non deve essere smaltito insieme ai normali rifiuti domestici. È responsabilità del proprietario smaltire sia questi prodotti sia le altre apparecchiature elettriche ed elettroniche mediante le specifiche strutture di raccolta indicate dal governo o dagli enti pubblici locali. Il corretto smaltimento ed il riciclaggio aiuteranno a prevenire conseguenze potenzialmente negative per l'ambiente e per la salute dell'essere umano. Per ricevere informazioni più dettagliate circa lo smaltimento delle vecchie apparecchiature in Vostro possesso, Vi invitiamo a contattare gli enti pubblici di competenza, il servizio di smaltimento rifiuti o il negozio nel quale avete acquistato il prodotto.

Latviešu valoda (Latvian) - Ekoloģiska informācija klientiem Eiropas Savienības jurisdikcijā

Direktīvā 2002/96/EK ir prasība, ka aprīkojumu, kam pievienota zīme ⌧ uz paša izstrādājuma vai uz tā iesaiņojuma, nedrīkst izmest nešķirotā veidā kopā ar komunālajiem atkritumiem (tiem, ko rada vietēji iedzīvotāji un uzņēmumi). Šī zīme nozīmē to, ka šī ierīce ir jāizmet atkritumos tā, lai tā nenonāktu kopā ar parastiem mājsaimniecības atkritumiem. Jūsu pienākums ir šo un citas elektriskas un elektroniskas ierīces izmest atkritumos, izmantojot īpašus atkritumu savākšanas veidus un līdzekļus, ko nodrošina valsts un pašvaldību iestādes. Ja izmešana atkritumos un pārstrāde tiek veikta pareizi, tad mazinās iespējamais kaitējums dabai un cilvēku veselībai. Sīkākas ziņas par novecojuša aprīkojuma izmešanu atkritumos jūs varat saņemt vietējā pašvaldībā, atkritumu savākšanas dienestā, kā arī veikalā, kur iegādājāties šo izstrādājumu.

Lietuvškai (Lithuanian) - Aplinkosaugos informacija, skirta Europos Sąjungos vartotojams

Europos direktyva 2002/96/EC numato, kad įrangos, kuri ir kurios pakuotė yra pažymėta šiuo simboliu (įveskite simbolį), negalima šalinti kartu su nerūšiuotomis komunalinėmis atliekomis. Šis simbolis rodo, kad gaminį reikia šalinti atskirai nuo bendro buitinių atliekų srauto. Jūs privalote užtikrinti, kad ši ir kita elektros ar elektroninė įranga būtų šalinama per tam tikras nacionalinės ar vietinės valdžios nustatytas atliekų rinkimo sistemas. Tinkamai šalinant ir perdirbant atliekas, bus išvengta galimos žalos aplinkai ir žmonių sveikatai. Daugiau informacijos apie jūsų senos įrangos šalinimą gali pateikti vietinės valdžios institucijos, atliekų šalinimo tarnybos arba parduotuvės, kuriose įsigijote tą gaminį.

Malti (Maltese) - Informazzjoni Ambjentali għal Klijenti fl-Unjoni Ewropea

Id-Direttiva Ewropea 2002/96/KE titlob li t-tagħmir li jkun fih is-simbolu fuq il-prodott u/jew fuq l-ippakkjar ma jistax jintrema ma' skart muniċipali li ma ġiex isseparat. Is-simbolu jindika li dan il-prodott għandu jintrema separatament minn ma' l-iskart domestiku regolari. Hija responsabbiltà tiegħek li tarmi dan it-tagħmir u kull tagħmir ieħor ta' l-elettriku u elettroniku permezz ta' faċilitajiet ta' ġbir appuntati apposta mill-gvern jew mill-awtoritajiet lokali. Ir-rimi b'mod korrett u r-riċiklaġġ jgħin jipprevjeni konsegwenzi negattivi potenzjali għall-ambjent u għas-saħħa tal-bniedem. Għal aktar informazzjoni dettaljata dwar ir-rimi tat-tagħmir antik tiegħek, jekk jogħġbok ikkuntattja lill-awtoritajiet lokali tiegħek, is-servizzi għar-rimi ta' l-iskart, jew il-ħanut minn fejn xtrajt il-prodott.

Magyar (Hungarian) - Környezetvédelmi információ az európai uniós vásárlók számára

A 2002/96/EC számú európai uniós irányelv megkívánja, hogy azokat a termékeket, amelyeken, és/vagy amelyek csomagolásán az alábbi címke megjelenik, tilos a többi szelektálatlan lakossági hulladékkal együtt kidobni. A címke azt jelöli, hogy az adott termék kidobásakor a szokványos háztartási hulladékelszállítási rendszerektől elkülönített eljárást kell alkalmazni. Az Ön felelőssége, hogy ezt, és más elektromos és elektronikus berendezéseit a kormányzati vagy a helyi hatóságok által kijelölt gyűjtőredszereken keresztül számolja fel. A megfelelő hulladékfeldolgozás segít a környezetre és az emberi egészségre potenciálisan ártalmas negatív hatások megelőzésében. Ha elavult berendezéseinek felszámolásához további részletes információra van szüksége, kérjük, lépjen kapcsolatba a helyi hatóságokkal, a hulladékfeldolgozási szolgálattal, vagy azzal az üzlettel, ahol a terméket vásárolta.

Nederlands (Dutch) - Milieu-informatie voor klanten in de Europese Unie

De Europese Richtlijn 2002/96/EC schrijft voor dat apparatuur die is voorzien van dit symbool op het product of de verpakking, niet mag worden ingezameld met niet-gescheiden huishoudelijk afval. Dit symbool geeft aan dat het product apart moet worden ingezameld. U bent zelf verantwoordelijk voor de vernietiging van deze en andere elektrische en elektronische apparatuur via de daarvoor door de landelijke of plaatselijke overheid aangewezen inzamelingskanalen. De juiste vernietiging en recycling van deze apparatuur voorkomt mogelijke negatieve gevolgen voor het milieu en de gezondheid. Voor meer informatie over het vernietigen van uw oude apparatuur neemt u contact op met de plaatselijke autoriteiten of afvalverwerkingsdienst, of met de winkel waar u het product hebt aangeschaft.

Norsk (Norwegian) - Miljøinformasjon for kunder i EU

EU-direktiv 2002/96/EF krever at utstyr med følgende symbol avbildet på produktet og/eller pakningen, ikke må kastes sammen med usortert avfall. Symbolet indikerer at dette produktet skal håndteres atskilt fra ordinær avfallsinnsamling for husholdningsavfall. Det er ditt ansvar å kvitte deg med dette produktet og annet elektrisk og elektronisk avfall via egne innsamlingsordninger slik myndighetene eller kommunene bestemmer. Korrekt avfallshåndtering og gjenvinning vil være med på å forhindre mulige negative konsekvenser for miljø og helse. For nærmere informasjon om håndtering av det kasserte utstyret ditt, kan du ta kontakt med kommunen, en innsamlingsstasjon for avfall eller butikken der du kjøpte produktet.

Polski (Polish) - Informacja dla klientów w Unii Europejskiej o przepisach dotyczących ochrony środowiska

Dyrektywa Europejska 2002/96/EC wymaga, aby sprzęt oznaczony symbolem znajdującym się na produkcie i/lub jego opakowaniu nie był wyrzucany razem z innymi niesortowanymi odpadami komunalnymi. Symbol ten wskazuje, że produkt nie powinien być usuwany razem ze zwykłymi odpadami z gospodarstw domowych. Na Państwu spoczywa obowiązek wyrzucania tego i innych urządzeń elektrycznych oraz elektronicznych w punktach odbioru wyznaczonych przez władze krajowe lub lokalne. Pozbywanie się sprzętu we właściwy sposób i jego recykling pomogą zapobiec potencjalnie negatywnym konsekwencjom dla środowiska i zdrowia ludzkiego. W celu uzyskania szczegółowych informacji o usuwaniu starego sprzętu, prosimy zwrócić się do lokalnych władz, służb oczyszczania miasta lub sklepu, w którym produkt został nabyty.

Português (Portuguese) - Informação ambiental para clientes da União Europeia

A Directiva Europeia 2002/96/CE exige que o equipamento que exibe este símbolo no produto e/ou na sua embalagem não seja eliminado junto com os resíduos municipais não separados. O símbolo indica que este produto deve ser eliminado separadamente dos resíduos domésticos regulares. É da sua responsabilidade eliminar este e qualquer outro equipamento eléctrico e electrónico através das instalações de recolha designadas pelas autoridades governamentais ou locais. A eliminação e reciclagem correctas ajudarão a prevenir as consequências negativas para o ambiente e para a saúde humana. Para obter informações mais detalhadas sobre a forma de eliminar o seu equipamento antigo, contacte as autoridades locais, os serviços de eliminação de resíduos ou o estabelecimento comercial onde adquiriu o produto.

Română (Romanian) - Informaţii de mediu pentru clienţii din Uniunea Europeană

Directiva europeană 2002/96/CE impune ca echipamentele care prezintă acest simbol pe produs şi/sau pe ambalajul acestuia să nu fie casate împreună cu gunoiul menajer municipal. Simbolul indică faptul că acest produs trebuie să fie casat separat de gunoiul menajer obişnuit. Este responsabilitatea dvs. să casaţi acest produs şi alte echipamente electrice şi electronice prin intermediul unităţilor de colectare special desemnate de guvern sau de autorităţile locale. Casarea şi reciclarea corecte vor ajuta la prevenirea potenţialelor consecinţe negative asupra sănătăţii mediului şi a oamenilor. Pentru mai multe informaţii detaliate cu privire la casarea acestui echipament vechi, contactaţi autorităţile locale, serviciul de salubrizare sau magazinul de la care aţi achiziţionat produsul.

Slovenčina (Slovak) - Informácie o ochrane životného prostredia pre zákazníkov v Európskej únii

Podľa európskej smernice 2002/96/ES zariadenie s týmto symbolom na produkte a/alebo jeho balení nesmie byť likvidované spolu s netriedeným komunálnym odpadom. Symbol znamená, že produkt by sa mal likvidovať oddelene od bežného odpadu z domácností. Je vašou povinnosťou likvidovať toto i ostatné elektrické a elektronické zariadenia prostredníctvom špecializovaných zberných zariadení určených vládou alebo miestnymi orgánmi. Správna likvidácia a recyklácia pomôže zabrániť prípadným negatívnym dopadom na životné prostredie a zdravie ľudí. Ak máte záujem o podrobnejšie informácie o likvidácii starého zariadenia, obráťte sa, prosím, na miestne orgány, organizácie zaoberajúce sa likvidáciou odpadov alebo obchod, v ktorom ste si produkt zakúpili.

Slovenščina (Slovene) - Okoljske informacije za stranke v Evropski uniji

Evropska direktiva 2002/96/ES prepoveduje odlaganje opreme s tem simbolom – na izdelku in/ali na embalaži z nesortiranimi komunalnimi odpadki. Ta simbol opozarja, da je treba izdelek zavreči ločeno od preostalih gospodinjskih odpadkov. Vaša odgovornost je, da to in preostalo električno in elektronsko opremo oddate na posebna zbirališča, ki jih določijo državne ustanove ali lokalne oblasti. S pravilnim odlaganjem in recikliranjem boste preprečili morebitne škodljive vplive na okolje in zdravje ljudi. Če želite izvedeti več o odlaganju stare opreme, se obrnite na lokalne oblasti, odlagališče odpadkov ali trgovino, kjer ste izdelek kupili.

Suomi (Finnish) - Ympäristöä koskevia tietoja EU-alueen asiakkaille

EU-direktiivi 2002/96/EY edellyttää, että jos laitteistossa on tämä symboli itse tuotteessa ja/tai sen pakkauksessa, laitteistoa ei saa hävittää lajittelemattoman yhdyskuntajätteen mukana. Symboli merkitsee sitä, että tämä tuote on hävitettävä erillään tavallisesta kotitalousjätteestä. Sinun vastuullasi on hävittää tämä elektroniikkatuote ja muut vastaavat elektroniikkatuotteet viemällä tuote tai tuotteet viranomaisten määräämään keräyspisteeseen. Laitteiston oikea hävittäminen estää mahdolliset kielteiset vaikutukset ympäristöön ja ihmisten terveyteen. Lisätietoja vanhan laitteiston oikeasta hävitystavasta saa paikallisilta viranomaisilta, jätteenhävityspalvelusta tai siitä myymälästä, josta ostit tuotteen.

Svenska (Swedish) - Miljöinformation för kunder i Europeiska unionen

Det europeiska direktivet 2002/96/EC kräver att utrustning med denna symbol på produkten och/eller förpackningen inte får kastas med osorterat kommunalt avfall. Symbolen visar att denna produkt bör kastas efter att den avskiljts från vanligt hushållsavfall. Det faller på ditt ansvar att kasta denna och annan elektrisk och elektronisk utrustning på fastställda insamlingsplatser utsedda av regeringen eller lokala myndigheter. Korrekt kassering och återvinning skyddar mot eventuella negativa konsekvenser för miljön och personhälsa. För mer detaljerad information om kassering av din gamla utrustning kontaktar du dina lokala myndigheter, avfallshanteringen eller butiken där du köpte produkten.

WEB: For additional information, please visit **www.linksysbycisco.com**

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d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

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The implementation was written so as to conform with Netscape's SSL.

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